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目　次 —— CONTENTS

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‘AQAR QŪF BEFORE ITS EXCAVATION IN 1942[1)]

Tim CLAYDEN*

Introduction

The mounds of ‘Aqar Qūf lie *c.* 30 kms to the north-west of Baghdad. The ruins are those of Dūr-Kurigalzu, a city built by the Kassite king Kurigalzu (x-1375 B.C.). Excavations began at the site in 1942 and have continued more or less continuously ever since. For many centuries before it was excavated, the remains of the ziggurat served as a landmark for travellers on the land route between the Mediterranean coast and the Arabian Gulf. It was variously identified as the Tower of Babylon; Nimrod’s tower; a lookout or beacon platform; the burial mound of pre-Sasanian kings; or more poetically a cool spot in which to relax for the Caliphs of Baghdad.

Ooghe [2007] has highlighted the importance of examining the accounts of early travellers to the Near East and of understanding the context in which they were written. Reviews of early travellers to Iraq[2)] have been made, but they provide only the scantiest historical background [*e.g.* Rogers 1901: 106–125; Hilprecht 1903: 1–69; Fossey 1904: I,6–28; Fagan 1979:16–47; Lloyd 1980: 7–21]. This paper reviews the ‘history’ of ‘Aqar Qūf in the post ancient Babylonian period. It seeks to place in context the references to, and descriptions of the site which appear in a variety of written sources from the Abbasid period until excavations commenced in 1942.

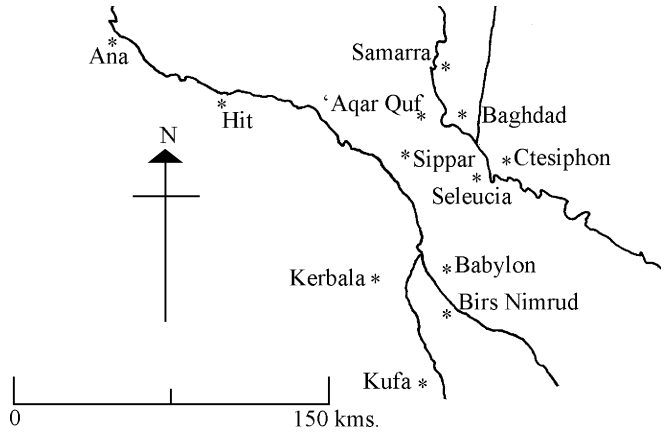

Fig. 1 Map of central Iraq.

Pre-Islamic

The last documentary evidence for the city of Dūr-Kurigalzu was in the neo-Babylonian period [*cf.* Zadok 1985: 121] by which time the name had been abbreviated to Dūr-Galzu. The excavated remains suggest that occupation, especially in the area about the ziggurat mound, continued in the Achaemenid period [Salman 1969: e-f; Jumailly 1971: 83–84]. The evidence for activity at the site in the Seleucid (323–63 B.C), Parthian (247 B.C.–224 A.D.) and Sasanian (224–651 A.D.) periods is confined to a copper coin of Vologases III [Baqir 1944: 13, no.11]; and some Parthian / Sasanian pottery found in tombs [Jasim *et al.* 2006: 162–164, fig.8]. Casual visitors to the mound also refer to Roman and Parthian coins washed out of the ruins, but no firm evidence (*e.g.* illustrations) is provided [Stevens 1923: 115; Stark 1951: 124].

There are no identifiable references to ‘Aqar Qūf in the written records of these periods.

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1) In preparing this paper I am grateful to Dr. St John Simpson for his helpful comments which greatly improved its quality. All errors that remain are mine.

2) I use the modern geographical term for ease of reference. Of course the Abbasid and Ilkhanid rulers would not have recognised the term. In the Ottoman period a sense of Iraq as a geographical unit did emerge, but was not formalised [see Tikriti 2009].

Early Islamic period

There is no excavated or documentary evidence for occupation at ‘Aqar Qūf in the early Islamic/ Umayyad period.

Abbasid period

In 762 A.D. Abū Ja’far al-Mansūr, the second Caliph of the Abbasid dynasty, founded Baghdad[3]. Various accounts [*cf.* Strange 1900: 1–14; Lassner 1983: 45] of this event exist, but perhaps the most graphic and complete appears in the history of al-Tabarī[4] [al-Tabarī 1995: 244–250]. The new city lay on established caravan routes [*cf.* Griffin 1996: 116] and Al-Tabarī [*ibid.,* 246] reports that al-Mansūr said ‘This is a place with which I am satisfied. Supplies can reach it via the Euphrates and Tigris. It’s a good place to build a city’.

Al-Tabarī’s detailed account refers to the existence of small villages or farms near the site of the future city of Baghdad, but there is no obvious reference to ‘Aqar Qūf. At the site itself there is excavated evidence [Baqir 1944: 11, 13 no.11] for occupation in the Abbasid period in the area adjacent to the ruin of the ziggurat (by then over two thousand years old). Though we cannot be certain as details of finely dated artefacts (*e.g.* coins) found at ‘Aqar Qūf have not been published, it is likely that the renewal of occupation at the site took place at or shortly after the foundation of Baghdad. ‘Aqar Qūf would have been one of the numerous settlements that supported the largely administrative centre that was Baghdad [*cf.* Adams 1965: 99].

A near contemporary of Al-Tabari’s, Ibn Mishawajl (d. 1030), refers to “Agrgūf some two parasangs[5] from Baghdad” [Margoliouth 1921: 20]. This is the earliest reference to the site. Of note is that the name of the site was as it is today a millennium later. Over a century after Al-Tabari’s death Ibn al-Athir wrote his ‘complete history of the world’. It may include a reference to ‘Aqar Qūf and Budge suggests that it provides evidence ‘that a flourishing city stood there (*i.e.* ‘Aqar Qūf) in the early centuries of the Hijrah’ [Budge 1920: 281, fn.2][6].

‘Aqar Qūf / ‘Akarkūf appears in the geographical gazetteers of two 13th century Arabic scholars - Yâkût (d. 1224) and al-Kazwîni (d. 1283). Both recorded [Musil 1927: 48, fn.35] that ‘Aqar Qūf was ‘a settlement in the administrative district of Dugejl, four parasangs[7] from Baghdad. Close by rises a knoll which can be seen from a distance of five parasangs’ [Oppert 1863: 258; Musil *ibid.*]. Yâkût also suggested that the site was the burial site of pre-Sasanian kings [Oppert *ibid.*[8]].

These early references to ‘Aqar Qūf are in geographical gazetteers in which toponyms are listed and discussed. Other examples include two 10th century books which list towns in Iraq - the *Hudūd al-‘ālam* [1970: 138–140] and al-Muqaddasī [2001: 95–104]. Al-Muqaddasī’s work also contains a short guide for visitors to Iraq on its system of government, taxes, customs and caravan stages [*ibid.*, 104 -114]. The style is dry and is rather like that adopted centuries later in the British Imperial Indian and Afghan Gazetteers published in the late 19th and early 20th centuries.

By the 9th century Baghdad was at the apogee of its success. Thereafter it declined [*cf.* Amedroz 1913; Waines 1977; Lassner 1983: 47]. The reasons for this decline are beyond the scope of this paper. In summary as the Abbasid administrative system failed so too did the irrigation systems and settlements about Baghdad and more widely in Iraq and were deserted [see Adams 1981: 225–228]. By the 11th century over 90% of the land that had been occupied in the Sasanian period

3) See Joffee [1998: 563–565] for a discussion of Baghdad, one of a group of newly founded capitals in Iraq.

4) Abū Ja’far Muhammad bin Jarīr al-Tabarī (A.D. 839–923) spent much of his life in Baghdad, but travelled extensively. His history covered the ancient world and ran down to 915 A.D.

5) One parasang is equivalent to *c.* 5.48 kms. Thus two parasangs is equivalent to *c.* 11 kms.

6) I have not been able independently to verify this reference.

7) Four parasangs is equivalent to *circa* 22 kms (*cf.* foot note 5).

8) Note: Not the Sasanian kings as suggested by Bewsher 1867: 164.

was abandoned [*ibid.*: 218]. The 13th century references to ʻAqar Qūf suggest that it did not share this fate.

Muslim, Christian and Jewish pilgrims, 10th – 15th centuries

Pilgrimage to sacred sites is an important element of the three great religions of the middle east [Shuiskii 1987; Gil 1987; Housley 1987]. For Muslims the hajj to Mecca is an obligation on all adults, subject to certain conditions. For Christians, though not obligatory, visits to the Holy Land are undertaken either as a penance (less so since the middle ages) or simply to worship at the site of significant events in the Bible [*cf.* Monga 1999: 162–163; Helfer 2005: 2368][9]. For Jews the remains of the Second Temple in Jerusalem are the holiest site in the world.

For all three religions Jerusalem was important, but at this period access was a contested issue. The Crusades enforced a Christian presence in the Levant between 1096 and 1291, but the Crusaders did not hold Jerusalem for all of that time. During this period Christian pilgrims could with greater ease (a relative term) visit the Holy Land, but Jewish and Muslim pilgrims were denied access that both had when Muslim powers held the city. Once the Crusaders and their kingdoms had been removed from the Levant, access to Jerusalem for Christian pilgrims became more difficult, but they still made the journey and recorded their impressions [*cf.* Wright 1848; The Palestine Pilgrims' Text Society 1884–1896; Hachicho 1964: 16–18; Day 1980: 202–203].

By the end of the 16th century such were the numbers of pilgrims travelling from England that transporting them had become a 'coveted business enterprise' and pilgrims 'an article of exportation' [Howard 1914: 3]. The degree of interest in pilgrimages to the Holy Land may be indicated by the fact that one of the earliest books (in 3 editions) to be printed in England was a guide for pilgrims – Informacon for pylgrymes published by Wynkin de Worde[10] in 1478. Not everyone, however, regarded pilgrimages with favour and Erasmus described them as a 'dissipation' [Howard 1914: 6; *cf.* also Houseley 1987: 661].

English pilgrims did not venture further eastwards than the Levant[11]. But, Jewish and Muslim pilgrims did. Between 1165 and 1173 a Spanish Jewish scholar, Benjamin of Tudela, travelled round the near east including Baghdad [Adler 1907: 54–65]. His account is detailed and accurate, but was not formally published until 1543. He visited the ancient site of Babylon [*ibid.*, 65–67]. He made no identifiable reference to ʻAqar Qūf.

Two Arabic bibliographies of the period list 32 Muslim pilgrim accounts of journeys – rihla – made between 850 and 1250 [Shuiskii 1987: 651; Helfer 2005: 2370]. One of the earliest accounts was by Ibn-Jubayr [2001] who between 1183 and 1185 travelled to Mecca and Medina; and through Iraq where he visited Baghdad [*ibid.*, 226–239]. He makes no mention of ʻAqar Qūf. A 150 or so years later in 1325 Ibn-Battūta[12] began a journey through the Middle East. He visited Baghdad [Ibn-Battūta 1962: 326–335], but makes reference neither to a 'Tower of Babylon' nor to ʻAqar Qūf. Neither traveller was particularly interested in ancient remains. Scholars, religious figures, mosques and the tombs of holy men were their chief interests.

Emissaries, missionaries and merchants in the Mongol period

The Crusades, though dramatic and extended, were limited geographically and had little impact in the wider Muslim world. However, the emergence of the Mongols, under Genghis Khan

9) See Runciman [1965: 38–50] for a discussion of early (*i.e.* pre-Crusades) Christian pilgrims.

10) De Worde died *c.* 1534 and was one of Caxton's earliest successors.

11) John de Mandeville's book, which he dictated drawing on earlier accounts, was probably based on hearsay rather than personal experience.

12) Ibn Battuta (1304–1368/9) was born in Morocco. His journey lasted for 29 years and he dictated the account drawing on earlier accounts.

(1167–1227)[13] was to have a far reaching and devastating impact on the fabric of the lands east of Cairo[14]. The attack in 1218 on Khwārazm [Bira 1998: 252–253] marked the start of the Mongol campaigns and only Ghengis Khan's death in 1227 brought a temporary halt to the wars.

In 1238 a second wave of Mongol attacks into Eastern Europe brought the Mongols to the horrified close attention of the various kings of Western Europe and the Pope. Envoys from Muslim rulers asking for help actually arrived in Western Europe, but were dismissed and the Bishop of Winchester (England) commented that they should 'allow these dogs to devour one another' – an enemy of the Muslim armies was a friend, or at least an uncertain ally, to the armies of Catholic Europe [Jackson *et al.* 1990: 15]. Indeed earlier reports of the Mongol attacks on the eastern reaches of the Muslim world had been garbled in transmission before they reached Europe and in the 1220s there was even a belief that the armies attacking the Islamic world were those of a Christian king, David [*ibid.*, 14–15] or Prester John.

It was not until 1241, the year Khan Ogotai died, that the Pope finally accepted the reality of the Mongol threat and a Crusade against them was declared, but it fizzled out. It was at this point that the Pope decided to send emissaries [*ibid.*, 28–32] to the Mongols to see what it was they wanted and to provide accurate information about them. A number of really brave travellers were sent east – among others Friar John of Pian de Carpini (1245–1247) and Friar William of Rubruck (1253–1255) [Jackson *et al.* 1990]. They successfully travelled to the court of the Mongol Khan and returned with information about the Mongol intentions.

In 1224 a new Khan was 'elected' and the plan to attack Iraq and Baghdad was even known to William of Rubruck [*ibid.*, 222–223]. In 3 weeks in February 1258, the Mongol army under Hülegü Khan conquered Iraq and brutally sacked Baghdad[15]. Two armies attacked the city. One advanced from the east down the Khursan road; and the other from the west from Anbar along the route of the Nahr Isa canal [Strange 1900: 341]. The Arab histories disagree only in how many were killed, and not that all the inhabitants were wiped out. If there was any settlement at 'Aqar Qūf at that time[16], it is most unlikely that it will have survived the Mongol attack and 1258 probably marks the end of formal occupation at the site. The destruction was considerable [Strange 1900: 334–345], but not as complete as the Arab historiographers describe and it became the seat of the minor Mongol dynasty – the Ilkhanids [*cf. ibid.*, 345–348; Wiet 1971: 166 and 171–172]. Further, through the Nestorian Church, Christianity had been accepted by some of the leading Mongols and their wives [Jackson 1990: 22–24; *cf.* also Ryan 1998] and this saved the Christians and their churches in the sack of Baghdad.

At the same time to the west, old trading routes were disrupted and the Crusaders and Byzantines used to serve the conflicting trading interests of Genoa and Venice. In 1199 a Fourth Crusade was assembled with the aim of attacking the Mamluks in Egypt. In two years from 1201 to 1203 the Crusaders were locked in negotiations with the Venetians over transportation fees. This culminated in the Crusaders unwittingly serving Venetian commercial interests by attacking Constantinople [Runciman 1965: iii, 109–122]. The Venetians had fallen out with the Byzantine rulers; and in any case had never wanted war with Egypt with whom they had a secret – from the Crusaders – trade agreement. In addition the Pope wanted to bring the Orthodox Church under the control of Rome[17]. Accordingly in 1204 the Fourth Crusade captured Constantinople which they sacked for nine days [*ibid.*, 123–124]. A Latin kingdom ruled Constantinople until July 1261 when the Byzantines, with

13) The precise date of Genghis Khan's birth is uncertain [*cf.* Jackson *et al.* 1990: 10, fn.3].

14) For a review of the campaigns of the Mongols up until *circa* 1251 see Jackson *et al.* 1990: 10–21.

15) For a summary of the Arab written sources for fall of Baghdad see Strange [1900: 340–343].

16) See Adams [1981: 225–228] for a summary of the evidence (written and from surface surveys) for the reduction in the size of Baghdad and the lower levels of settlement in the surrounding area in the Late Abbasid and Ilkhanid Periods.

17) In 2004 Pope John Paul II apologised for the sack of Constantinople 800 years previously.

the assistance of the Genoese to whom they gave a preferential trading agreement, regained control of the city [*ibid.*, 287].

The combination of the Crusader wars along the Levantine littoral; the Mongol attacks from the east; and the conflict between the Byzantines and the successors to the Fourth Crusade in Constantinople, meant that trade through the Middle East would have been hazardous.

But travellers still risked the journey. The most famous traveller of the age was a Venetian merchant, Marco Polo[18] who in a 24 year journey (1271–1295) travelled as far as the Mongol empire in China. His book achieved wide distribution and was a key text for other explorers [Verlinden 1988: 27; Ryan 1993: 649]. It was first printed in 1477, but more than 140 manuscript copies predated its publication [*ibid.*, 650]. His description of Baghdad ('Baldach[19] or Bagadet, anciently called Babilonia' [*ibid.*]) 50 years after its sacking[20], is abbreviated and he probably did not visit the city [Marco Polo 2008: 36]. He made no mention of 'Aqar Qūf.

Marco Polo's account differs from that of Benjamin of Tudela and Ibn Battuta. Whilst the later were chiefly concerned with religious matters, Marco Polo focused on historical events; international relations; and most importantly on trade. Marco Polo's book also highlighted the fact that the apparently tolerant Mongols would welcome Christian missionaries [Ryan 1993: 651]. In the century that followed a number of missionaries travelled to India where soon a number were active and establishing communities [*cf.* Ryan 1993; 1998].

One such missionary was a Franciscan priest, Friar Odoricus of Udine. In 1318 he was sent east as part of an extended missionary movement. He returned to Udine in 1331 having visited India, Sumatra, Borneo, China and Persia. He travelled from north to south through Iraq and recorded that 'from thence (*i.e.* northern Mesopotamia) I travelled into Chaldaea, which is a great kingdome, and I passed by the Tower of Babel …' [Odoricus 1904: 411]. It is not clear whether Odoricus saw the ziggurat ruins at Birs Nimrud or at 'Aqar Qūf and either are possible.

In the late 14th and early 15th centuries the army of Timur devastated the great cities of the Near Eastern trade routes. In 1399 / 1400 Timur sacked Baghdad, Aleppo and Damascus. Once again the overland routes to India and China were disrupted and travel made difficult and unprofitable. Baghdad was reduced to an impoverished ruin of its Abbasid glory and it would be 500 years before it began to recover.

Overland trade with the Near East in the 16th and 17th centuries

The 16th century and the Renaissance was a period of extra-ordinary change in Europe and the Middle East. Politically it was the time of Suleiman the Magnificent (1520–1566) whose conquests took him to the gates of Vienna; control over most of the Middle East (Syria in 1516, Egypt in 1517, and Iraq in 1533/4); capture of the eastern Mediterranean and North Africa; and success against the Persians to the east. In Europe the war between Spain / Hapsburg Empire and France ran for most of the century. In northern Europe the Netherlands fought for independence from Spain and England emerged as a regional power under Henry VIIIth and Elizabeth Ist.

It was the century when the hegemony of the Catholic Church was broken when in 1517 Martin Luther published his 95 Five Theses and established Protestantism; and in 1526 the English Parliament passed the Act against the Pope's Authority. Religion became a serious issue in the various European wars of the century.

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18) The authenticity of the manuscript published in 1997 as 'The city of light' and which claims to be the memoires of a Jewish merchant, Jacob of Ancona, who travelled to China and returned to Italy in 1272, is discussed by Boulnois [2008: 356–361].

19) Baldach was a common form of Baghdad in European writings. It gave its name to a village on land owned by the Knights Templar, Baldock, in Hertfordshire, England [Jackson *et al.* 1990: 216, fn.2]; and to baldechino – 'an Oriental brocade with gold and silver thread made in Baghdad' valued by European markets in the time of the Crusades [Griffin 1996: 119].

20) Some rebuilding must have taken place as in 1274 the Bishop of Mosul moved to Baghdad.

It was also the century when the expeditions of the late 15th century explorers from Spain and Portugal were exploited. International trade and nascent colonialism became issues of strategic concern to rulers throughout Europe. Each sought to establish exclusivity of access for their countries. This resulted in a series of small scale wars and piracy that was, in England, dressed up as legitimate activity.

In 1498 the Portuguese sailor and navigator, Vasco da Gama successfully rounded the Cape of Good Hope and made a return trip to Calicut. Within just a few years Portuguese ships loaded with spice and other goods from India and beyond were sailing direct to Europe having completed the trip round Africa[21]. For the rest of the century they dominated the sea routes to the valuable markets of the sub-continent.

In parallel to the trading success of the Portuguese in the East Indies, the Spanish were exploiting the 'discovery' of America by Christopher Columbus in 1492. Within 40 years of Columbus' voyage the Spanish conquests in central and southern America were producing vast quantities of bullion. This supply continued until the eighteenth century[22].

Against this background of Spanish, Portuguese[23] and, to a more limited (geographically) extent, Venetian and French commercial success the English and the Dutch were frustrated outsiders. In an effort to break the stranglehold on the sea routes to the east Indies, the English sought to discover a way through the north west passage (Hugh Willoughby and Richard Chancellor in 1553 and John Davis in 1585) or, more successfully, through Russia (Richard Chancellor, Richard Johnson and Anthony Jenkinson in 1553–1558). European settlement in North American was begun. A new concept in international trade emerged in Northern Europe and in England – the joint stock trading company – *e.g.* in England The Muscovy Company (traded 1555–1917), The Levant Company (traded 1581–1825), The Virginia Company (1606–1624), The Plymouth Company (1606–1620), and most successfully the English East India Company (1600–1874) and in the Netherlands the Dutch East India Company (1602–1798).

Europe exported manufactured goods and bullion. England's exports were kersey woollen cloth, tin and lead [Inalcik 1994: 369]. The commodities sought by the European markets in the sub-continent were spices (*e.g.* pepper) which could be bought in India and sold at huge profit in Europe; and silk from Persia. The scale of profits to be made may be gauged from the pepper market. In 1586, for example, Portuguese merchants were able to sell Indian pepper in Europe with a profit margin of over 500% [*ibid.*, 352]. In 1570 Konrad Rott of Augsberg unsuccessfully tried to corner the European pepper market. As part of his business plan he calculated that in a year Europe consumed 28 000 quintals (*circa* 2.8 million kgs.) of pepper [*ibid.*].

Until 1498 the overland routes through Alexandria and Aleppo to India were without rival. Along with the Silk Route to China they were they were the medium by which trade, with goods and merchants carried on great caravans of camels, between Europe and the sub-continent and China was conducted. The caravans through Syria congregated in Aleppo before heading south east down the course of the Euphrates either on the river itself to Ana / Fallujah and then overland to Baghdad

21) In 1501 five Portuguese ships unloaded 380 tons of pepper and spices at Falmouth [Braudel 1975: I. 544]. By 1510 a permanent settlement at Goa had been established by the Portuguese.

22) Estimates of the amount of silver extracted from the mines at Potosi, Peru, and exported to Spain vary – 51100 metric tons, or 81% of world production at the time [Habib 1999: 34–35]; and 45000 tons between 1556 and 1783 [Ferguson 2008: 23]. By 1600 Spain was drawing an average of 40 million ducats per year from America [Calder 1998: 38]. The bullion never, however, amounted to more then 25% of national needs [Green 1970: 212]. This wealth did not stop, and may even have contributed to, Spain's default on its international debts in 1557, 1560, 1575 and 1596. The Potosi silver in turn was used as the trading currency with the markets of the Indies and Far East causing inflation in those regions [Habib 1999: 35].

23) Such was the rivalry between Spain and Portugal that in June 1494 Pope Alexander VI presided over a settlement between the two kingdoms under which a north south line running through Brazil the world was divided into two trading blocks – Spain west of the line and Portugal the east.

and the down the Tigris to Basrah; or west of the Euphrates directly to Basrah [*cf.* Parish 1860; Ward 1897; Handbook of Mesopotamia 1917; Carruthers 1918; 1929; Randolph 1928; Grant 1937]. The route was dominated by Venetian and French merchants who in the eleventh century were granted 'capitulations' (the right to trade) by the Byzantine emperors – rights that continued after the Ottoman conquest of Constantinople in 1453.

Between 1511 and 1553 English merchants tried to break into the Levantine market [Hakluyt 1907: 50–51; Braudel 1975: I. 613–615]. In 1535 Francis I of France signed a trade agreement with Suleiman the Magnificent. One clause of the treaty was that it should also apply to England if she so wished and if the treaty was ratified in London within 8 months – it was not [Wood 1935: 2][24]. 20 years later in 1553 an English merchant, Anthony Jenkinson received from the Sultan in Aleppo authority to trade on terms matching those already granted to French and Italian merchants in region [Hakluyt 1907: 36–38; Hachico 1964: 20–21], the agreement was never exploited. The extended economic recession then in England may have been the reason why[25]. Equally the threat of piracy, and the fact that Venice as an intermediary trading party was cheap and successful were considerable factors [Wood 1935: 3; Willan 1955: 402].

The recession in England produced a move to nationalist and restrictive trade policies. Trade and colonisation were regarded as possible solutions to the economic decline [*cf.* Williamson 1945: 125–133; Calder 1998: 14–113]. This played a role in the thinking of an English clergyman, Richard Hakluyt who in 1589[26] published his first edition of a collection of traveller accounts [Scammell 1974]. Hakluyt died in 1616, but his work was continued by Samuel Purchas in three publications [1613, 1616 and 1625]. An earlier and similar compendium of travel accounts was produced by a Venetian, G. B. Ramusio [1550–1559][27], who also produced his book in an effort to inform merchants and stimulate trade. The books of Ramusio, Hakluyt and Purchas are good examples of such works being published in Europe [*cf.* Monga 1999: 167; Helfer 2005: 2371].

In 1571 at the Battle of Lepanto the Ottoman navy was defeated by an alliance of Spanish, Venetian, Genoese and Papal ships. The battle was part of the conflict between the Ottoman Empire and the Catholic kingdoms of Europe. Between 1537 and 1540 and again in 1570 and 1573 Venice and Constantinople were at war. It was during the second war that the Sultan sought trade partnerships outside the Latin confederacy and approached England [Inalcik 1994: 365][28]. The Ottomans were seeking, among other goals, the strategic aim of maintaining their middleman position in European / Indian / Persian trade [*ibid.*, 354].

At the same time the economic crisis in England was forcing the high officers (Burghley and Walsingham) of the land to find solutions [*e.g.* Williamson 1945: 50–52; Stone 1949; Tawney *et*

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24) See Jensen's [1985] discussion on the background to, and outcomes of the Franco-Ottoman alliance.

25) The extent and causes of the English economic depression in the middle of the 16th century are debated issues [see Wordie 1997 for a review]. Several indicators suggest that there was a recession – currency devaluation [Fisher 1990: 85; *cf.* also Tawney *et al.* 1951: II, 186–187, 193–203; III, 346–359 for the Tudor documents; Jordan 1966: 64, fn.47; 70, fn.7177, fn.98; 80–81, fn.113 for the diary entries of Edward VI about currency debasement]; a collapse of exports to the Low Countries, partially because of war on the mainland [Tawney *et al.* 1951: 89; Jordan 1966: 116, 23 March 1552; 168–173 for problems in the reign of Edward VI and his unrealised plan for dealing with the issue]; a 30% decline in the cloth trade [Fisher 1990: 90]; five-fold inflation rate between 1530 and 1640 [Calder 1998: 18; *cf.* also Tawney *et al.*: 1951: II, 189–192 for the Tudor documents], though Wordie [1997] concludes that the price rises would have been worse but for deflationary factors. Hoyle's [1998] review of taxation in the period suggests that there was a recession between 1520 and 1570 [*ibid.*, 650]. The Port Books for the main English ports record no ships arriving from or going to the Levant in the 60s and 70s of the 16th century; nor do there appear to have been any High Court cases involving Levantine trade between 1550 and 1583 [Willan 1955: 400]. The death of Henry VIII in 1547 followed by the minority rule of Edward VI (1537–1553, and king at 9 years old in 1547); the controversies of Queen Mary's tenure on the throne (1553–1559) and the early years of Elisabeth I's long reign would not have helped create economic or financial stability in England.

26) The second edition appeared in 1598–1600. See Day [1980: 90–92] for a summary of Hakluyt's life; and *ibid.* [105–142] for a list of all the accounts published by Hakluyt.

27) There is a modern edition, 1978–1988, which is available on line at – http://ww.liberliber.it/biblioteca/licenza.

28) For the historical background to the Ottoman position in the 1580s see Green [1970: 361–369].

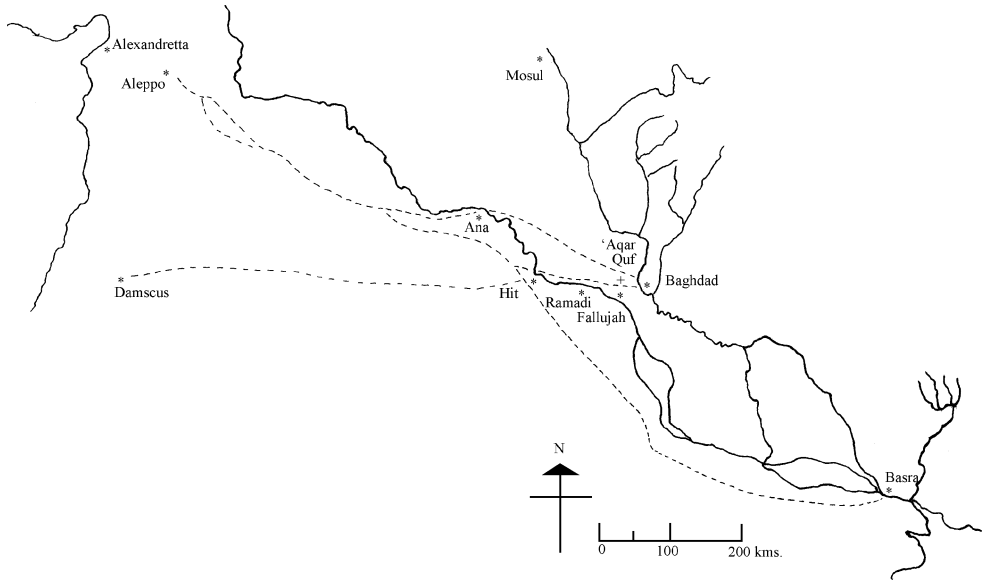

Fig. 2 The caravan routes from Aleppo and Damascus to Basra.

al. 1951: II, 124–127; III, 311–345], though the Privy Council may not have had full control of the outcomes [Panko 1968: 32–44, esp. 43, fn.134].

In 1579 William Harborne, a London merchant led a small party of his fellow English traders to Constantinople essentially to scout out the possibilities for trade with the Ottoman Empire [Bent 1893: vii-viii]. What they found encouraged them to judge that such trade would be profitable and prompted the Sultan to open negotiations with Elizabeth I[st] to establish a trade agreement between the two kingdoms. The potential benefits of such an agreement were examined by Walsingham in a submission to the Queen [Epstein 1908: 245–251]. Between 1579 and 1580 there was an exchange of letters between the Sultan and Queen Elizabeth I[st] culminating in a bilateral trade agreement signed in 1580 [Hakluyt 1907: 52–63; Beckingham 1974: 184–186]. The agreement precipitated the creation of The Levant Company in 1581, a company that was to continue until 1825 [Bent 1890; Epstein 1908: 1–19; Wood 1935: 15–41]. Naturally neither the Venetians nor the French welcomed the arrival of the English in Constantinople and ambassadors of both tried unsuccessfully to contain the first English ambassador to the court of Constantinople, William Harborne [*ibid.*, 14][29)]. In London in 1590 The Venice Company, which had hitherto had the monopoly on import rights of 'currants, wine and oil from the Venetian dominions' [*ibid.*, 18] was merged with The Levant Company. The first Ottoman ambassador to London arrived in 1607 [Bent 1893: xi].

By the mid 1580s The Levant Company, favoured by Elizabeth I[st 30)], was making profits said to be 300 % using 19 ships [Epstein 1908: 18–19][31)], including the largest merchant vessel in the world [*ibid.*, 17]. A Portuguese traveller and merchant, Teixiera, recorded that in 1605 in Aleppo the annual trade measured in ducats for each nation was worth 1.5 m to the Venetians; 800 000 to the French; 300 000 to the English and 150 000 to the Dutch [*cf.* Harris 1960: 66][32)]. The Company

29) The secret despatches of the Venetian Ambassador, Giovani Moresin, to Constantinople for the period April 1583 – September 1584 record the petitions by the French Ambassador to the Pasha to have the English Ambassador, William Harborne, rejected by the Sultan; and then his unsuccessful attempts to have Harborne expelled. The despatches also record the various spies the Venetian ambassador had in the court of the Sultan [Brown 1894: 48–104; online at http://www.british-history.ac.uk].

30) In 1582 Elizabeth I[st] loaned the company 10 000 pounds of silver [Wood 1935: 16]

31) In 1588 the Hercules and four other ships unloaded cargo worth £55 000 – a huge some in those days [Willan 1955: 408–409] when an unskilled labourer earned *circa* £10–£15 p.a. [Stone 1961: 103].

32) The letter book for 1598–1602 of an English factor at Aleppo, William Clarke, gives an insight into how trade with India was conducted [Harris 1960]. Barret's summary, written in 1584, of customs tarrifs, exchange rates and weights and measures in use in Baghdad,

also played an important role in expanding knowledge about the Near East in England. Many of the officials were educated men who were interested in the lands in which they lived beyond just trade matters.

Against this background in 1583 Queen Elizabeth I[st] commissioned a London merchant, John Newberry, to travel to India and China with letters from herself seeking the establishment of trading relations [Hakluyt 1907: 269–271]. Newberry and two others, Ralph Fitch[33] and John Eldred[34], sailed on the Tiger[35] to Tripoli and then travelled overland to Basrah via Aleppo and Baghdad. They then went by sea to Goa (having on the way to deal with false accusations of spying levelled against them by a Venetian commercial rival).

Newberry's account of the trip is scrappy, but those of his two companions, Fitch and Eldred, are more informative and both contain descriptions of their 18 hour journey from Fallujah to Baghdad and of the ruins at ʿAqar Qūf.

Eldred's description is vivid:– '… here also are standing the ruines of the olde tower of Babel, which being upon a plaine ground seemeth a farre off very great, but the nearer you come to it, the lesser and lesser it appeareth; sundry times I have gone thither to see it, and found the remnants yet standing above a quarter of a mile in compasse, and almost as high as the stone work of Pauls steeple[36] in London, but it showeth much bigger. The bricks remain, in this most ancient monument be halfe a yard thicke, and three quarters of a yard long, being dried in the Sunne onely, and between every course of bricks there lieth a course of mattes made of canes, which remaine sound and nor perished as though they had been layed within one yeere …' [Eldred 1904: 5][37].

Fitch's description is shorter:– '… the Tower of Babel is built on this side the river Tigris towards Arabia from the towne (*i.e.* Baghdad) about seven or eight miles, which tower is ruinated on all sides, and with the fall thereof hath made as it were a little mountaine, so that it hath no shape at all; it was made of brickes dried in the sonne, and certaine canes and leaves of the palme tree layed betwixt the brickes. There is no entrance to be seene to goe into it. It doth stand upon a great plaine betwixt the rivers of Euphrates and Tigris …' [Fitch 1904: 467].

In 1587 a Venetian merchant, Caesar Frederick, who travelled the Syrian / Iraq land route several times between 1563 and 1581, published an account of his experiences[38]. In 1590 Gasparo Balbi, a fellow Venetian and a jeweller, who had made similar journeys to India published a description of his travels [Charpentier 1920: 148]. Balbi's account is less reliable and he probably plagiarised Frederick's work [*ibid.*, 157–161].

Frederick's account of the ruins at ʿAqar Qūf is unambiguously a description of the site[39]:–

Basrah and the Indies was meant as working document for merchants [Barret 1904]. The Company exports of English broadcloth and woollen material was increasingly successful in the early 17[th] century [*cf.* Davis 1961: 117–126].

33) For biographies of Ralph Fitch (d. 1611) see Edwardes [1973] and Dickie [2008].

34) John Eldred (1552–1632) was a successful London merchant. He became famous in his lifetime becoming rich by trading in spices from the East Indies. The large house he bought in 1597 in Great Saxham was known locally as 'Nutmeg Hall'. For a summary of his life see Baldwin [2008].

35) For the circumstances of the voyage see Ferguson [1902: xxv–xxx]. See also Rowse [2003: 197–200] for an account of the voyage; Loomis [1956] and Taylor [1964: 111–113] for the identification of the Tigris in Shakespear's Macbeth and Twelth Night.

36) This would have been the 'old St Paul's' burnt down in the Great Fire of London in 1666.

37) See Hoenselaars [1999: 35] for a discussion of how Eldred's association between St Paul's and the Tower of Babel influenced contemporary writers.

38) Frederick's account was included by Ramusio in his compendium.

39) Sponsored by his brother-in-law, between 1573 and 1576 Leonhart Rauwulf, a doctor from Ausburg, travelled through the Near East. In 1575 he visited Baghdad and then travelled west to Fallujah. He gives an account of ruins he saw and which he identifies as the Tower of Babylon:– '… just before the village of Elugo (*i.e.* Fallujah), is the hill wheron the castle did stand in a plain, whereon you may still see the ruines of the fortification, which is quite demolished and uninhabited: behind it pretty near to it, did stand the Tower of Babylon, which the children of Noah (who first inhabited these countries after the Deluge) began to build up to heaven; this we see still, and it is half a league in diameter, but it is so mightily ruined, and low, and so full of vermin that have bored holes through it, that one might not come near it within half a mile, but only in two months in the winter when they come

'… the tower of Nimrod or Babel is situated on that side of the Tygris that Arabia is, and in a very great plaine distant from Babylon seven or eight miles: which tower is ruinated on every side, and with the falling of it there is made a great mountaine: so that it hath no forme at all, yet there is a great part of it standing, which is compassed and almost covered with the aforesayd fallings: this Tower was builded and made of foursquare Brickes, which Brickes were made of earth, and dried in the Sunne in maner and frome following: first they layed a lay of Brickes, then a Mat made of canes, square as the Brickes, and in stead of lime, they daubed it with earth: these Mats of Canes are at this time so strong, that it is a thing wonderfull to beholde, being of such antiquity: I have gone round about it, and have not found any place where there hath bene any doore or entrance: it may be in my judgement in circuit about a mile, and rather lesse then more ...' [Frederick 1904: 369–370].

In 1603 another English merchant, John Cartwright, visited Iraq and his account of his trip, including his description of 'Aqar Quf was included in Purchas' collection of published manuscripts:– '… two places of great antiquitie did wee thoroughly view in the Countrey: the one was, the ruines of the old Tower of Babel (as the Inhabitants hold unto this day) built by Nimrod, the Nephew of Cham, Noahs sonne. And now at this day, that which remayneth is called, the remnant of the Tower of Babel: there is standing as much, as is a quarter of a mile in compasse, and as high as the stone-worke of Pauls Steeple in London. It was built of burnt Bricke cimented and joined with bituminous Mortar, to the end, that it should not receive any cleft in the same. The Brickes are three quarters of a yard in length, and a quarter in thickness, and betweene every course of Brickes, there lieth a course of Mats made of Canes and Palme-tree leaves so fresh, as if they had been layd within one yeere …' [Cartwright 1905: 521].

In a brief note in 1604 Pedro Teixiera, a Portuguese merchant who journeyed from Baghdad to Aleppo in 1604–05, described the ruins at 'Aqar Qūf. The most interesting aspect of the text is that it includes the first reference in a western publication (originally in the Purchas publications of the early seventeenth century) to the modern name for the site:– '… On Tuesday, the 14th (December 1604), just before sunrise, we marched from the water wheels, heading west over good and level country, with a few little hills. After three leagues march we entered the ruins of a great city, where are yet standing, one tall *monara* or *alroran*[40], and two fragments of a thick strong rampart of burnt brick and mortar. The Arabs call it Karkuf …' [Texiera 1902: 74].

Between 1614 and 1626 a wealthy Roman, Pietro Della Valle[41], made an extraordinary journey through the Middle East and India. What began as a pilgrimage to the Holy Land became a major expedition. He travelled through Egypt, the Holy Land, Constantinople and then by the desert caravan route to Baghdad. In Baghdad he married. He also sought out and found the correct site of ancient Babylon [Reade 2008: 25–26]. From Baghdad he went through Persia to India and then finally home to Rome by sea. Throughout he wrote lengthy letters to a friend in Rome and these form the basis of the books published by his sons after his death [Valle 1990]. Sadly for the study of 'Aqar Qūf, Della Valle does not appear to have visited the site which had he done so, he would have described it in one of his letters.

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not out of their holes …' [Budge 1920: 282].

It is difficult to identify the ruins Rauwulf saw. 'Aqar Qūf is on the Fallujah-Baghdad route and its height made it a landmark and could be what Rauwulf saw [*e.g.* Parrot 1954: 11]. But Rauwulf describes the ruins as low and near Fallujah and not Baghdad. Budge [*ibid.*] argued that the ruins were of the ziggurat at Borsippa. However, Borsippa is not on the direct route between Baghdad and Fallujah and the 'Aqar Qūf ruins may hardly be described as 'low'. It is almost certain that the ruins he saw were of Al-Anbar which are close to Fallujah [*cf.* also Reade 2008: 22 and 24]. Possibly Rauwulf was told that the 'Tower of Babylon' was on the road to Fallujah, and he confused the site of the ruins.

40) Minaret.

41) Della Valle lived 1586–1652.

In 1644, in the course of a long journey to the east Tavernier[42], a French merchant, saw ʿAqar Qūf. In his 1678 [86–87] publication he described the site as follows:– '… at a distance almost equal between Tigris and Euphrates, there appears a vast heap of earth, which the people call to this day Nimrod. It stands in the midst of a wide plain and may be discover'd a great way off. The vulgar sort believe it to be the remains of the Tower of Babel; but there is more probability of the Arabian opinion, who call it Agartouf, and believe it to have been built by an Arabian Prince, who always kept a beacon on the top to assemble his subjects together in time of war. The heap of earth was about three hundred paces in circuit; but it is not easie to guess at the ancient height, the rest being fall'n to ruines, but only eighteen or twenty fathom. It is built of brick dry'd in the sun, every brick being ten inches square, and three thick. The building is thus raised. Upon every row of canes on reeds bruis'd to pieces and mixed with wheat-straw, and spread an inch and a half thick, lie seven orders of these bricks with a little straw between each; then another bed of reeds, and six rows of bricks; then a third with five rows; decreasing in that manner till you come to the top. The form of it seems to have been rather square than round; and in the highest part of that which remains there appears a hole like a window; if it were not rather an outlet for water, or a hole for the scaffolding. In short, according to the description of Moses there is no likelihood that this should be the ancient Tower of Babel'.

The key point in this account is that Tavernier correctly argued that the ziggurat ruins at ʿAqar Qūf could not be those of the Tower of Babylon. In doing so he was following De Valle who visited Baghdad in 1620 [1990: 102] and who correctly identified Babel with Babylon [*ibid.*, 106][43]. With the correct identification of the site of Babylon [see Reade 2008 for a summary of the process] ʿAqar Qūf's days as the Tower of Babylon came to an end and with that interest in the site and its ruins declined[44].

The Grand Tour

The 16th century also saw the beginning of what later became known as the 'Grand Tour' [*cf.* Howard 1914: 141–177; Lehmberg 1999; Monga 1999: 163–164]. The first guide to travelling published in English appeared in 1575 and was a translation from the German of Hieronymus Turlerers 'The travelier of Jerome Turler' published in 1574. In an essay published in 1625 Francis Bacon summarised the essence of such journeys. The aim was to educate the rich young men of the kingdom. In among the items they were encouraged to record in travel diaries were ancient ruins and antiquities. Greece and Italy were the key destinations on a Grand Tour, but the adventurous did travel to Egypt and the Holy Land. Beyond that travel to Baghdad remained dangerous and the preserve of men who had to make the trip – merchants and employees of The Levant and East India Companies.

An exception to this was a German scholar, Georg Fernberger who, between 1588 and 1593, journeyed through Egypt, the near east and India. He kept a travel diary (in Latin). The Near Eastern and Indian sections of his diary were not published until 1999 and so had no impact on the understanding of the region in the 16th and later centuries. His work does, however, reflect two points.

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42) Jean-Baptiste Tavernier (1605–1689) was primarily a successful merchant who between 1631 and 1668 made several journeys to Persia and India. He published his account of his journeys [1678] for the expressed purpose of serving as an aid to other travellers.

43) The Della Valle was the first European to publish a cuneiform text [Budge 1920, I: 283, fn.1].

44) Of course not everyone was aware of the correct identification of the site of Babylon. Between 1672 and 1674 Abbé Carré travelled to India via Syria and Iraq under the instructions of Minister Colbert in the administration of Louis XIV and of the French East India Company. Carré's account of his trip was published in 1699. Carré sailed up the Tigris to Baghdad and states that he saw 'the Tower of Babel which is only two day's journey from this place (*i.e.* Salman Pak) [Carré 1948: 858]. Earlier in 1671 Carré states that he visited the Tower of Babel from Baghdad [*ibid.*, 588, fn.1]. He states that he did so in a day and that to get to it he had to cross a number of flooded canals and ditches. This would appear to be ʿAqar Qūf rather than Birs Nimrud. It also suggests that the 'Tower' he saw as he sailed up the Tigris was also ʿAqar Qūf which would have been a two day's journey from Salman Pak [*ibid.*].

Firstly it illustrates the growing interest in travelling as an educatory process and not in support of trade or religion. As such he was one of the early explorers in the region. Secondly, Fernberger visited Baghdad in 1589 travelling on the established route from Ana to Felluja and on to Baghdad and saw the ruins of the ziggurat at 'Aqar Qūf. He does not describe the ruins in detail, but did identify them as the 'turrim Nemroth' [Fernberger 1999: 59]. Fernberger also took a brick from the ruins of the ziggurat back to Europe [Ooghe 2007: 237] and thus collected the first recorded artefact (now lost) from the site. The inscribed brick could not be read and it could not serve as a catalyst for discussion of the true identity of the ruins.

Adventurous travel in the 18th century

By 1600 the English and Dutch had broken the Venetian[45] and French[46] monopoly of the land route trade to India. Trade along the overland route to India continued through the 17th and 18th centuries [Ambrose 1931], but the establishment in 1600 of the English East India Company marked the end of the central role The Levant Company had with India, though it continued to function until 1825. During that time The Levant Company appointed and paid consuls and ambassadors in a number of cities in the near east [Hachicho 1964: 40–42]. The English East India Company was one of most successful corporations in history. By the time of its dissolution in 1874 it had seen its successes to have included huge profits and its establishment as the de facto rulers of India to the borders of Afghanistan. It became the jewel in Great Britain's Imperial Crown.

Both companies employed officers who would have a profound impact on the scientific and archaeological studies of modern day Syria, Iraq and modern day Iran. Without these men it is unlikely that the study of ancient Mesopotamia would be as advanced as it is today.

In Europe an increasingly academic interest in the region developed[47]. As the 18th century wore on there was a developing curiosity about ancient Egypt. Travel also became easier and the Grand Tour became fashionable, though this was generally confined to Europe. Travel as a way of educating oneself and then the readership of the accounts travellers published once they returned became very fashionable [Weber 1953: 104–186; Hachicho 1964: 41–91]. Some of the richer travellers took with them the publications of their predecessors and in their own books sometimes plagiarised the earlier accounts giving rise occasionally to repetition.

Though many of these travellers passed through Baghdad, few visited 'Aqar Qūf[48]. A notable exception was a British navy surgeon, Edwards Ives[49] who was in Baghdad in 1758 and visited 'Aqar Qūf describing his trip as follows:– 'At three this morning, all the party … left Baghdad for Nimrod's tower. It lies west by north, distant about nine miles … the ground began to rise in a gentle ascent, for half a quarter of a mile before we reached the tower, occasioned, as we imagined, by the rubbish of the old buildings which once stood here. Whether the tower was at first of a square form, is now difficult to determine, though the former is most probable, because all the remaining bricks are placed square, and not in the least circular. The bricks are all twelve inches square, and four and an half thick. The cement is of mud or slime, mixed with broken reed as we mix hair with mortar; which slime might have been from one of the great rivers, or taken out of one of the swamps in the plain … Betwixt every seventh or eighth brick in the tower, is a layer of reeds, of which I

45) Shakespear's Merchant of Venice reflects the rivalry between England and Venice in the late 16th / early 17th centuries.

46) See Horniker [1946] for a survey of the commercial rivalry in the Levant between France and England.

47) See for example the diary entry by John Evelyn (1620–1706), a founder member of the Royal Society in London, for 20 December 1673:– 'I had some discourse with certaine strangers, not unlearned, who had been born not far from old Niniveh: They assur'd me the ruines being still extant, & vast, wonderful was the buildings, Vaults, Pillars, & magnificent fragments now buried, & remaining: but little could they say of the Toure of Babel that satisfied me …' [Bédoyère 1995: 200].

48) See, however, the gift of a much crumbled brick from 'Aqar Qūf given to the British Museum in 1768 from the 'supposed Tower of Babilon' [Reade 2008: 25].

49) See Laughton [2008] for a summary of the few facts known about Edward Ives.

took a few for the sake of curiosity, also some of the slime, and a piece of both sorts of brick, the harder and softer; for those which lie in the rubbish are of a much harder substance, than what now remains in the tower. The height of the ruin is 126 feet; the diameter of the largest and middle part about 100 feet. We judge it to be solid to the centre; yet near the top there is a regular opening of an oval form, but as we could not climb up to it, it appears however from the present look to have been a window. The circumference of that part of the tower which remains, and which is above the rubbish, is about 300 feet, but probably could the foundation be come at, it would be found of far greater extent. Mr Doidge, from whose draught with a pencil, the copper-plate here inserted, was taken, calculated the visible ruins of the tower to contain about 100 000 cubic feet. The present Turks, Jews and Arabians, are fond of believing this to be the identical ruin of the ancient tower of Babel, for which they assign a variety of reasons; but all so void of the appearance of truth … I am clearly of the opinion, from its situation, and many other circumstances, that it never could have been the tower of Babel, but rather suspect it to have been a beacon or watch-tower to give notice of the approach of an enemy or perhaps used as an observatory to inspect the various motions of the heavenly bodies …' [Ives 1773: 297–298].

The account is detailed and accurate, but the most important aspect of the publication was the drawing of the ziggurat ruins. This too is accurate. Not only is it the first published drawing of the ziggurat ruins, it was also the best illustration of the ruins until that of Ker Porter (see below). Ives knew that 'Aqar Qūf was not the Tower of Babel and he ascribed a more modern date to the ruins as well as a different function.

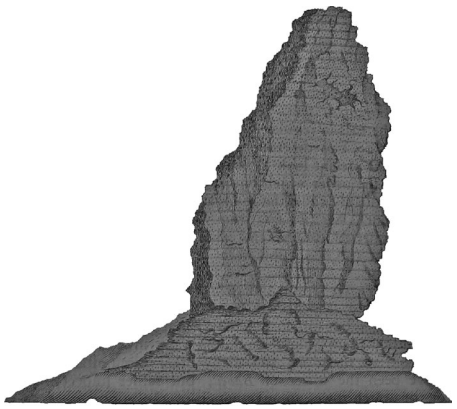

Fig. 3 The ziggurat at 'Aqar Qūf [after Ives 1773, opposite page 297].

In 1761 Frederick V, King of Denmark, sponsored a scientific expedition to Egypt, Arabia and the Near East. He did so on the advice of Professor Johann Michaelis of Göttingen University who proposed, in a 235 page brief, that the expedition could answer questions, mainly Biblical, in region. The expedition consisted of six academics one of whom was Carsten Niebuhr, a mathematician. After journeying through Egypt and Arabia Niebuhr, the only member of the party still alive, travelled through Mesopotamia in 1765. In his publication of his journey Niebuhr notes that he visited the ruins at 'Aqar Qūf and dismisses its identification as the Tower of Babylon:– 'Plusieurs voyageurs ont pris Agerkuf pour la tour de Babylone. Mais celle-ci étoit sans contredit dans le voisinage de l'Euphrate, et Agerkuf n'est pas loin du Tigre. Cependenat on ne peut pas bien decider aujourd'hui à quelle dessein cet edifice à été elevé. Peut-êtr etoit-ce le terrain sur lequel un des premiers Califes de Baghdad, ou meme un des Rois de Perse qui residoit à El Madeien, avoit unde maison de campagne, pour prendré un air fraix et froid, sur la hauteur …' [Niebuhr 1776: ii, 248].

19th century

By the beginning of the 19th century there was a general understanding that the ruins at 'Aqar Qūf were not those of the Tower of Babylon. The various non-indigenous suggestions as to its function were that it was an Abbassid structure which the Caliphs used as a recreation point to escape the heat of Baghdad [Niebuhr *ibid.*]; an Islamic (unspecified date) watch-tower or beacon [Ives *ibid.*]; the ruins of a Parthian city [Rawlinson 1862: 28, fn.]; and the ruins of an ancient Babylonian city, Duraba [Ainsworth 1838: 172; Rawlinson 1862: 27] or Accad [Ker Porter 1821: 279]. The local inhabitants thought it was a tower built by Nimrod [*e.g.* Fernberger *ibid.*; Fitch *ibid.*; Eldred *ibid.*; Tavernier *ibid., etc.*] or even more anciently as the burial place of pre-Sasanian kings (Yâkût) [*cf.*

Bewsher 1867: 164]. The issue was not to be settled until 1861 when cuneiform was deciphered (see below).

From the end of the 18th century and increasingly in the 19th century a series of British travellers made the journey overland from the eastern Mediterranean to Baghdad and beyond. Iraq was the subject of a number of geographical and hydrological surveys by British or Indian Government sponsored expeditions. The possibility that the Euphrates and Tigris rivers might be used for riverine trade was an important issue in the first half of the century. The first scientific visitors were, however, archaeologists. At the end of the 18th century the English East India Company ordered its resident in Basrah to send a collection of objects bearing cuneiform inscriptions to London [Lloyd 1980: 10][50]. In 1801 the East India Company resident in Baghdad sent several bricks and an Inscription of Nebuchadnezzar I to London [Fossey 1904: i.15]. The first sustained study of ancient Iraq, however, was by Claudius James Rich, appointed the British resident in Turkish Arabia in 1807[51].

In the course of his work exploring Babylonia looking for ancient remains, Rich visited 'Aqar Qūf in 1811 and he published his description of the ruins 4 years later:– '… Akerkouf, or, as it is more generally called Nimrod's Tower, for the inhabitants of these parts are as fond of attributing every vestige of antiquity to Nimrod, as those of Egypt are to Pharoah. It is situated ten miles to the N.W. of Bagdad, and is a thick mass of unburnt brick-work of an irregular shape, rising out of a base of rubbish; there is a layer of reeds between every fifth or sixth (for the number is not regulated) layer of bricks. It is perforated with small square holes, as the brick work at the Birs-Nemroud, and about half way up on the east side is an aperture like a window; the layers of cement are very thin, which, considering it is mere mud, is an extraordinary circumstance. The height of the whole is one hundred and twenty six feet; diameter of the largest part, one hundred feet; circumference of the foot of the brick-work above the rubbish, three hundred feet; the remains of the tower contain one hundred thousand cubic feet (vide Ives's travels, p.298). To the east of it is a dependent mound resembling those at the Birs, and Al Hheimar …' [1816: 41][52].

It is not clear by whom or even precisely when, but an inscribed brick was taken from 'Aqar Qūf to London before 1816 when Thomas Maurice wrote his commentary on the history and ruins of Babylon and identified the brick [Maurice 1816: 125].

In 1818–1819 the exotic figure of Sir Robert Ker Porter[53] travelled through Iraq. Ker Porter was a noted painter, diplomat who was knighted in four different countries; married a Russian princess; painted Simon Bolivar; and was present at the battle of Coruña. He visited Baghdad and made the day trip out to 'Aqar Qūf [1821: II. 275–280]. He states that the ruins were called by the local Arab population Tell Nimrood and by the Ottoman Turks Nemrood Tepassé [*ibid.*, 275]. He adds that the name Akarkouff was used to indicate the area about the ruin and may have been the name of an ancient Babylonian city [*ibid.*, 275–6].

Ker Porter described the ruins:– 'On arriving at the huge pyramidal mass which appeared in the center of this tract, we found it standing upon a gentle gradual elevation, ascending from the perfect level upwards of sixty yards. This apparently foundation hill, though in fact only a collection of rubbish round the pile itself, consists if loose sandy earth, intermixed with fragments of burnt brick, pottery and a kind of hard clay partially vitrified. I measured one of the baked bricks that was nearly entire; it formed a square of twelve inches, in thickness two and three quarters, and was of

50) Hager [1801] published illustrations of cuneiform inscriptions from the collections of the East India Company, Cardinal Borgia and Dr. Hulme.

51) Claudius James Rich (1786–1821) was a gifted linguist and an intrepid traveler and employee of the East India Company [*cf.* Alexander 1928; Lloyd 1980: 12–13, 16–21; Lane-Poole 2008].

52) After his death Rich's wife published more of his papers including extracts from Rich's diary showing how much he drew from his diary in his published work [Rich 1839: 2–3].

53) For summary of Ker Porter's (1777–1842) life see Barnett [1972].

an excessively hard substance. No characters whatever were traceable on this specimen, nor on any of the fragments we saw. From the gentle elevation just described, rises an enourmous solidly-built mass, crowning it like a rock, and composed entirely of sun-dried brick. Its present irregular shape, worn away by time, and furrowed by the rain of ages, leaves no possibility of doing more than conjecturing its original form. Its sides face the cardinal points … Neither mounds nor any rubbish of ancient decay, track its more distant vicinity in any direction except to the east, where, not many paces from the foot of the Tepessé, a couple of extensive and high heaps of ruins, composed of the same materials with those of their more gigantic neighbour, vary the perfect flat of the plain. The height of the Tepessé, from the summit of the gradual slope, from which the more ponderous fabrick shoots upward, to the towering irregular top of the whole, may be about one hundred and twenty-five or thirty feet; and its circumference at the bottom of this upper structure, is three hundred feet; which huge pile, at about ten feet in a perpendicular line from the its base, measures a hundred feet in the breadth of its face. From its foundation, and the whole way up to its summit, the different layers of sun-dried brick or clay, of which it is composed, may be traced with great precision. But the several courses vary so much in height, that some are twelve, others eighteen, or twenty feet,; while every brick in each layer of the course is united to its neighbour by a thin lining of pure slime; no other element whatever being visible; though each horizontal division between these courses is marked by a stratum of reeds … they bed every fifth or sixth layer of brick, to a thickness of two inches, lying regularly one over the other, unmixed with any other substance; and, as the adjacent part of the bricks gradually crumbled away, these strata project from the surface, and are very distinguishable at a considerable distance … I drew a large quantity out, and found many of them two feet in length. It does not appear that in constructing these sun-dried bricks, any straw was mixed with the fabrick; and in examining various fragments of burnt brick, I sought in vain for a morsel of bitumen. The whole of this curious pile seems to be solid, excepting where certain square perforations, going directly through, must intersect each other in the heart of the building, and were, probably, intended to preserve it from damp, by the constant succession of free air. There is also, on its northern face (which is virtually perpendicular,) and at a considerable elevation from the base, an opening of an oval form, rather larger than a common-sized window; but it does not penetrate farther into the pile than six or eight feet .. some traces of a former city are certainly apparent … the remains of a canal of great magnitude are still visible somewhat to the north of Akarkouff …' [*ibid.*, 275–279].

Ker Porter's description of the ruins is accurate as are his illustrations, though they did not gain the currency that the later drawing published by Chesney did (see below). In his discussion of the possible identity and nature of the site, Ker Porter suggests [*ibid.*, 279] that it might be identified with the city Accad which appears in Genesis, He further notes that the ruins may be those of Sittace mentioned by Xenephon and that its bricks may have been used to build Baghdad [*ibid.*]. He firmly dismissed the suggestion that it was Babylon. As to the ruins of the ziggurat he suggests that it was the 'base of some loftier superstructure, probably designed for the double use of a temple and an observatory; a style of sacred edifice common with the Chaldeans, and likely to form the principle object in every city and town devoted to the idolatory of Belus and the worship of the stars'.

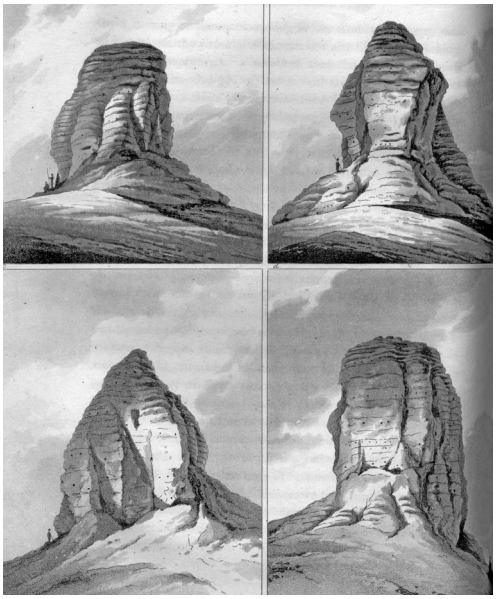

Fig. 4 Four views of the ziggurat ruin at 'Aqar Qūf by Ker Porter [1821: II. Pl. LXVIII.a-d].

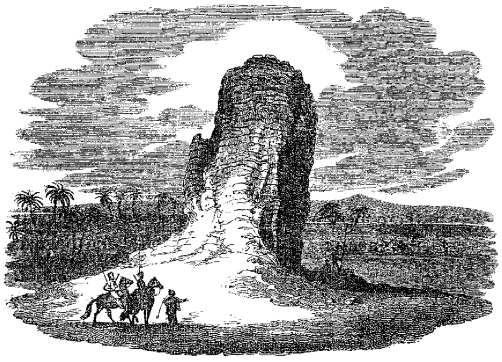

Fig. 5 Buckingham's [1827: 394] illustration of the ziggurat ruins at 'Aqar Qūf.

[*ibid.*, 280].

It is interesting that of all the early visitors to 'Aqar Qūf it was the diplomat artist Ker Porter who came closest to correctly identifying the age and original function of the ruins at the site.

James Buckingham[54] was a journalist who in the early 1820s travelled through Iraq when he visited 'Aqar Qūf and published his impressions including those of the site [1827: 394–402]:– '… The ruined monument caller Akkerkoof, and more generally Kasr Nimrood or Nimrod's palace, is a shapeless mass of brick-work, rising from a broad base, now so worn away as to be a mere heap of rubbish … the part that remains is composed of unburnt bricks, of a large size, cemented together by thin layers of mud, and between every five or six rows of brick, or at intervals of about three feet, are layers of reeds. These last were placed across each other in four separate layers, that is, the first and third shewing their ends outwards, and the second and fourth their sides, as in the weaving of a straw mat. The softer substance of the brick having gradually crumbled away by the operation of the elements, these layers now project beyond the surface, and form distinct ridges, which are seen at a considerable distance in regular lines … … The whole mass … As it stood, resembled the remains of a brick pyramid, more than any other kind of building. Its base occupied an extent of nearly three hundred feet square. From thence, a slope went up, as on a heap of rubbish, which, however, was evidently part of the original work; for beneath the surface, now worn into mud by the wind and weather, the layers of bricks and reeds could be plainly traced. This slope was sufficiently gentle, in most places, to be ascended on foot without difficulty, and, after a perpendicular height of about fifty feet, it led to the more perfect mass, where the brick-work is still firm and distinct. This rises in a tall heap, nearer to a pyramidal than any other form, though it may, with the strictest propriety, be called shapeless, as it is destitute of regularity in every part of its outline. Some portions of it, indeed, rise perpendicularly, and there are appearances of holes and channels on the present outer surface … On the north-east side, and about half way up the height of the more perfect portion that remains, is a passage like an arched window, still open, its termination not being visible from any part of the heap on which I stood … Though the interior of this solid mass of building was composed of unbaked bricks, its exterior surface seems to have been coated with furnace-burnt ones, many of which, both whole and broken, are scattered about the foot of the pile, and are said to resemble in size and shape those at Babylon, though they are never written on as at that place.

Around this detached ruin, in different directions, but more particularly on the south and west, are long mounds and smaller heaps evidently amassed from the wreck of former buildings, strewed over with burnt and unburnt bricks, and plain glazed pottery. Stone is nowhere seen … Sufficient vestiges of these remain, to prove that this Tower of Nimrod, as it is called, did not stand alone, but had near it either a city, or a considerable number of smaller buildings of some kind or other. There are still traces of a large canal to be seen, running through the principle part of the remains … The indefinite nature of this mass of brick-work in the Tower, has rendered it difficult even to imagine what was the precise kind of edifice of which it is a part … The canal seen here is, doubtless, the remains of the canal of Isa … From the extent and nature of the mounds at Akkerfoof, there is no reason to believe that the city there was very large. Indeed, the principle ruin is so unlike a place of residence of any kind, that the conclusion to which we came on the spot was, that it must be the remains of

54) James Silk Buckingham (1786–1855).

some isolated monument, either of a sepulchral or religious nature; few motives excepting those of devotion and respect for the dead, being sufficiently powerful to induce the erection of such masses, when purely of a monumental kind, as this seemed to be ….'.

Buckingham was the first visitor to observe the mounds that surrounded the ziggurat which he correctly took to be evidence for buildings which once surrounded the ruin [*ibid.*, 398]. Buckingham, like Ker Porter, also observed the remains of a canal running through the site [*ibid.*, 398] and which he identified as the Nahr Isa [*ibid.*, 399].

In 1827 another officer in the employ of the East India Company, Robert Mignan, decided to explore Babylonia. He journeyed on foot from Basra to Baghdad and on northwards. While in Baghdad he visited ʿAqar Qūf spending two hours at the site after which he published his notes on the site and an illustration [1829: 102–108, illus. page 106]. Mignan had intended to conduct a limited excavation and had he done so would have been the first to do so at the site, but bad weather forced him back to Baghdad [*ibid.*, 108]. Mignan describes the site as follows:– '… we gained the summit of a ponderous mass of ruin, which is called by the Arabs Tull Akerfkouf, vulgarly Agergoaf, and by the Turks Nemroud Tepessy, both of which appellations signify the Mound of Nemroud, or Nimrod, not the Tower of Nemrouth, as it has been translated. Our path was partially strewed with loose pieces of burnt and unburnt brick and tile … The ruins of a city are here very apparent, extensive undulating mounds stretching towards the South and East; while to the North and West they are comparatively small, and extend only a short distance from their giantlike neighbours. This ruin sweeps irregularly upwards, and its form appears to have been originally square, for the bricks are placed so as to favour this opinion; it does not, however, exactly face the cardinal points, as some former travellers assert. It is entirely composed of sun-dried bricks, made of clay mixed with chopped straw, each measuring a square of nine inches by four in thickness. At every seventh course of bricks, a layer of reeds is placed between the horizontal courses of the brickwork, without any apparent cement. These layers are very regular from top to bottom; but the bricks composing this colossal mass are of uncommon beauty, when we consider the material of which they are composed. This structure certainly has been the habitation of some important personage; nay, I almost fancy I beheld the residence of a rich and powerful sovereign.

Fig. 6 Mignan's [1829: 106] illustration of the ziggurat ruins at ʿAqar Qūf.

The ruin is without doubt, solid, and is pierced with small holes, which appear to have been designed for the purpose of admitting a free current of air … On the North-eastern face, nearly in the centre, is an aperture, somewhat resembling a Gothic window, for what purpose it was intended, it is now impossible to determine … From the summit of the brickwork, it is one hundred and twenty five feet, the circumference is four hundred feet, and from the brickwork to the foundation of the rubbish, which now forms its pedestal, it is twenty feet … I do not think this ruin ever exhibited the written character, or the bitumen which is used throughout Babylonian remains; nor in searching among the surrounding mounds, could I trace vestiges of building in any mass resembling the remnants of a regular architectural structure; though the surface of these mounds was strewed with broken bricks, earthenware vessels, vitrified pieces of clay, many perfectly black; and small stones, once forming

a portion of, but now surviving the clay that formed the principal ingredient of every brick…' [*ibid.*, 102–108].

In 1829 Francis Chesney[55] surveyed the possible routes of what would become the Suez Canal. Two years later he lobbied the British government to develop a riverine route through Iraq using the Euphrates. In 1836–1837 using two steamships, one of which sunk, he travelled up the Euphrates gathering the data which he subsequently published [1850 and 1868; *cf.* Lloyd 1980: 82–86]. The proposal was never taken up[56], but the published results do contain much that is of interest to archaeologists. The expedition visited 'Aqar Qūf in April 1836:– '… Soon after leaving Felujah in the morning, we had passed Suidia or Kush, and in the afternoon we halted at Aker-Kuf – which grand monument had been our landmark for several hours. This was the Akaré Nimrúd of the Arabs, and the site of the third primeval city of the Bible (footnote refers to Genesis X, 8,9 – actually X, 10 which refers to 'Babel, Erech, Accad and Calneh in the land of Shinar') and even at the risk of being delayed beyond sunset, when the gates of Baghdad are always closed, we determined to examine these interesting remains. The conspicuous object which we had now been watching for so many hours, I now found to have been a pyramid, built of sundried bricks, on which soft and friable materials. Time had made such ravages as to have partly defaced its original form. It seems to have been constructed of layers of these bricks, placed alternately upon one another at right-angles, until a thickness of 2 feet and 11 ½ inches had been attained. Over each portion so built, a layer of reeds seems to have been carried quite through the structure, each layer having a depth of 1 ¾ to 2 inches. Over this another layer of bricks was placed – then another of reeds – and so on, section by section, until the desired height was attained. The existing remains of Akar-Kuf measure 110 feet from east to west, and 128 feet from north to south; and it has still an elevation of 128 feet above the ground, although its top has long since crumbled away, and has now the appearance represented in one of the plates in the earlier volumes of this work. About midway between the ground and the summit there is an entrance door, probably the portal of the tomb, which, according to the Arab tradition, is that of Nimúd himself. Unfortunately, I had no means of getting up to this height, and as time also failed, we hastened on to Baghdad …' [Chesney 1868: 82–83].

In 1862 two British military officers made a detailed survey of the area between the Tigris and Euphrates rivers where they are closest to one another [Bewsher 1867]. While Chesney [1850] published the first map showing the location of 'Aqar Qūf (identified as Accad), the map accompanying Bewsher's work is better showing the location and approximate extent of the ruins of 'Aqar Qūf. For decades Bewsher's map was the best published chart of the area and deserves close study even today as it shows mounds, areas of cultivation and river and stream beds. 'Akr Kūf is shown just to the north of the road to Baghdad from the Euphrates. Bewsher visited 'Aqar Qūf and noted that it lay on a canal to the east which Bewsher traced but lost in the Saklawiyen swamp to the north. He described the site:– ' The large and conspicuous ruin now called Akr

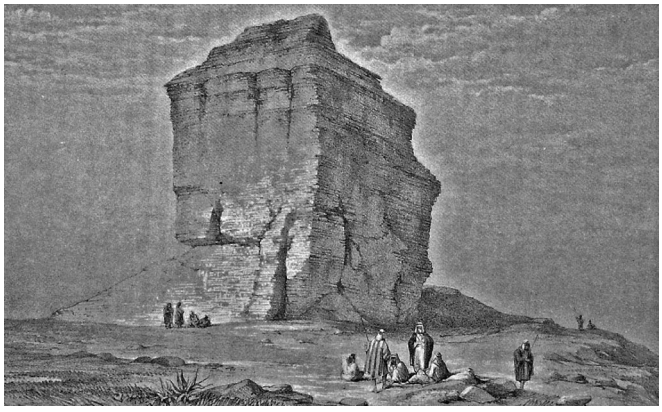

Fig. 7 Chesney's [1850: Pl. VIII] illustration of the ziggurat ruins at 'Aqar Qūf.

55) For a biography of General F. Chesney (1789–1872) see Lane-Poole 1885.

56) In reporting the successful completion of the voyage down the Euphrates the *Times* referred to the possibility that Napoleon in 1814 had planned to threaten Britain's control of the route [Anonymous 1841].

Kûf is 10 ½ miles, a little north of west, from the Bridge of Boats at Baghdad. This ruin is composed of sun-dried bricks, 14 inches square and nearly 4 inches thick. Between the layers of bricks is one of reeds or mats, and between every seventh and eight an extra thickness of these reeds can be noticed. This mass of sun-dried bricks is solid to all appearance, is nearly square in shape, and stands on a ruin of apparently kiln-burnt bricks and lime. It is surrounded by extensive ruins …'[*ibid.*, 163].

Interest in the ancient remains of Babylonia and Assyria developed out of the accounts of visits to the region. Though interest in Babylon, because of its Biblical connection, was initially the focus of attention, in the event Mesopotamian excavation began at Nineveh under the French Consul, Emile Botta. In late 1842 he began excavations moving to Khorsabad in 1843 [*cf.* Lloyd 1980: 96–98]. In 1842 Botta and Austen Henry Layard met in Mosul. They became friends and Layard saw what excavation at the Assyrian sites could produce. In 1845 he obtained private funding from the British Ambassador in Istanbul and began excavations at Nimrud. The results of both Botta and Layard's work were to prove to be spectacular. In the late 1840s a young English geologist, William Kennet Loftus, took leave of absence from his Turco-Persian geological and border surveying work to excavate at Uruk, Susa and Larsa. The publication of his work appeared in 1857, the year after he had died at sea on his way to a new post in India. He does not record work at ʿAqar Qūf, but a contemporary [Bewsher 1867: 163] notes that Loftus did excavate at the site. If this is correct then these would have been the first excavations at ʿAqar Qūf, but unfortunately they were not published.

In parallel to the development of interest in, and active conducting of excavations in Iraq work on deciphering cuneiform was maturing. In 1839, building on the work of others, Henry Rawlinson, a young officer in the East Indian Army, published his copy and translation of the trilingual inscription at Besitun. With the cuneiform inscriptions being read the correct identification of some of the sites

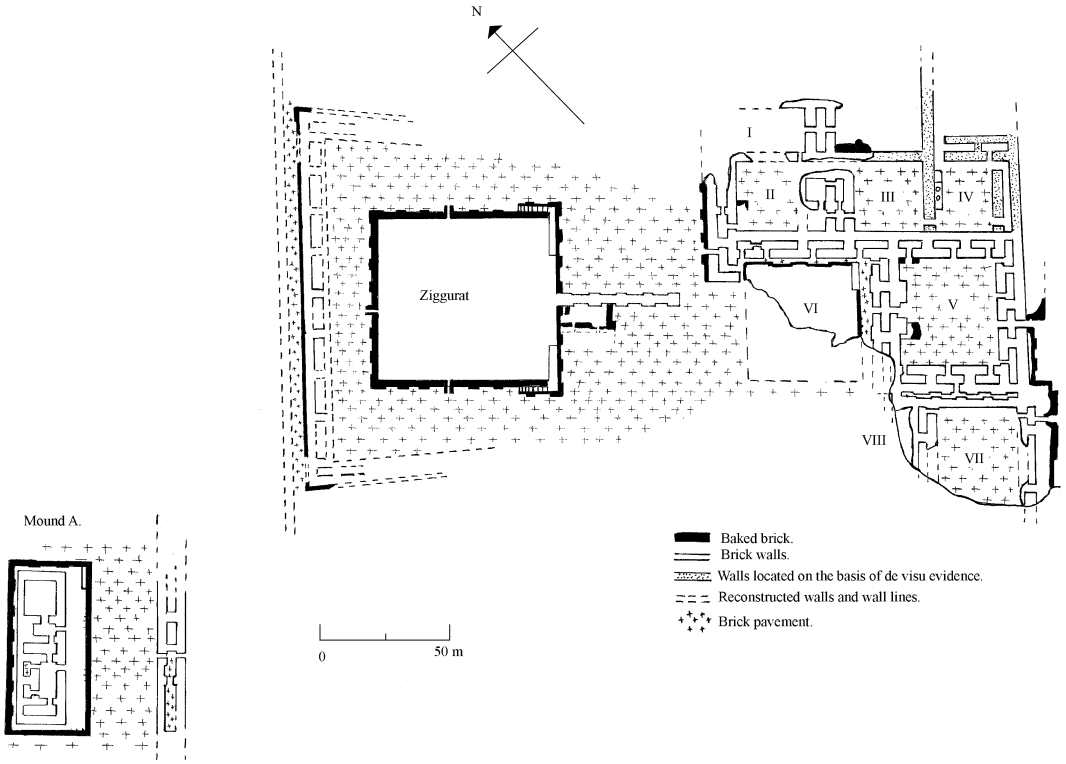

Fig. 8 Plan of the excavated remains of the Kassite temple area and ziggurat at ancient Dūr-Kurigalzu or modern ʿAqar Qūf [composite drawing by the author after Baqir 1944: Plate II; Baqir 1945: Plate I; Baqir 1946: Plate XXII; Jumailly 1971: 97, Plan 8; personal observation 1986; Google Earth].

of ancient Mesopotamia became possible. One such identification was made possible by Rawlinson's publication in 1861 (I R 4, no. XIV 1) of an inscription from 'Aqar Qūf based on the remains of text on three stamped bricks [Brinkman 1976: 213, Q.2.15.1, fn.20; Walker 1981: 55, no.60] collected at the site.

The earliest summary of the evidence for Dūr-Kurigalzu was by Oppert [1863: 255–258] who identified 'Aqar Qūf as Dūr-Kurigalzu [*ibid.*, 257]. Oppert drew not just on the brick inscriptions from 'Aqar Qūf, but also on the texts emerging from the excavations in Assyria and the references they contain to Dūr-Kurigalzu. This work was summarised in 1881 by Delitzsch [207–208] who stated (incorrectly) that the bricks published by Rawlinson contained a reference to Dūr-Kurigalzu. From this point most authors accepted the identification of the site as Dūr-Kurigalzu and the ruins as those of a ziggurat. Some, however, did not [*cf.* Peters 1897, I: 189, who suggested that it was 'the ruin of an ancient tower or fortress which guarded the canal centre' in the Abbasid period].

In 1869 the Suez Canal was opened and with it the drastic reduction in journey times from Europe to the Far East. The overland route from Aleppo did, however, remain in use right up until the First World War and various visitors to Baghdad published accounts of journey including the last leg from Fallujah to Baghdad [*e.g.* Ward 1897: 353–356; Harper 1892; Peters (in 1888) 1897: 182–190; Cowper (in 1891) 1894: 227–237; Baedeker 1906: 411–412; Musil (in 1912) 1927: 125–128]. As travel became easier and excavation work in Iraq increased, sight seeing visits to Dūr-Kurigalzu became common place. 'Aqar Qūf, identified as Dūr-Kurigalzu, featured in the Baedeker guide to the region [Baedeker 1906: 412][57]. The ruins had become a tourist attraction. At the same time the large depression to the north east of the site became widely known as the Akar Kuf depression or Lake Akar Kuf [*cf.* Willcocks 1910: 2, and accompanying map][58].

The first published photograph of the ziggurat mound was by J.P. Peters who visited the site en route to his excavations at Nippur in 1888 [Peters 1897, I: facing page 188]. The best published photograph of the site before its excavation was by Budge [1920, I: facing page 326]. Zehnpfund [1910: 9–10] published a short study of the site. The most comprehensive review of the city before its excavation was by Sarre *et al.* [1920: 96–111] – Unger's summary for RLA [1938] was weak.

20th century before excavation

For the British the First World War in Iraq had been a traumatic experience. In 1916 a British Indian Army expeditionary force intended to take and hold Iraq from the Ottomans was defeated and Kut al-Amara on the Tigris became a name associated in Great Britain with military disaster. But while the British survived the war, the Ottoman Empire did not. Iraq became a British Mandate. This transition marked a dramatic influx of foreign, mainly British administrators and soldiers[59].

A further factor was oil. In 1908 the world's first mass produced and owned car, the Ford Model T, went into production. At the same time the debate between the proponents of coal and oil fired naval ships was veering towards diesel. Oil as the power source of the twentieth century was thereafter in increasing demand. In 1912 the Turkish Petroleum Company (TPC, 50% British owned) was formed to find oil in Iraq. Ownership of the TPC became a point of dispute in the negotiations after World War One. The negotiations were concluded in 1925[60] and on October 15th 1927 oil

57) 'To the left is the conspicuous ruin of 'Aker Kûf which formed part of the Babylonian town of Dûr-Kurigalzu, situated 4 hrs to the N.W. of Baghdad' [Baedeker 1906: 412].

58) Sir William Willcocks (1852–1932) was an engineer in Imperial British service. He worked on irrigation projects in Egypt (the first Aswan dam), South Africa and Iraq as the Director General of Irrigation. He was responsible for planning the construction of the Hindiya Barrage near Babylon.

59) The 1906 edition of Baedeker's guide to Syria and Mesopotamia reported that there were only *c*. 50 European residents in Baghdad [Baedeker 1906: 407].

60) The importance of the agreement and the history behind it was fully reported in the London *Times* [Anonymous 1925].

was discovered north of Kirkuk. At last Iraq had a commodity that meant merchants travelled to and not through Baghdad. Baghdad began to develop as a modern city and travel to it became a matter of routine by motor vehicles.

The oil companies were also to contribute to the study of ancient Mesopotamia either through practical support for excavations [*e.g.* at Nimrud, Mallowan 1966: 15]; employees who developed an academic interest (*e.g.* George Roux[61]); or with the results of geological surveys [*e.g.* Lees *et al.* 1952; Larsen 1983: xix–xx].

As for ʻAqar Qūf, it became a picnic spot for people living in Baghdad [*e.g.* Bell 1911; Stevens 1923: 114–115]. In 1930 the renown traveller, Freya Stark[62] visited ʻAqar Qūf and wrote to her father telling him of the visit:–ʻWe went to a rather attractive place last Saturday, not more than forty minutes car ride from Baghdad and with cultivation close by, but actually in the desert with the black flocks and tents about in the distance among the grass just sprouting invisibly to all but Iraqi sheep, and with the yellow mounds and low ridges of old cities and canals spread round us. Aqqar Kuf, a corner of an old ziggurat built up like a Dartmoor tor with ridges of three feet or so of solid raw brick like earth around, and layers of reeds – still doing their work – appearing with rough edges just like the crystal ridges that run along the granite of the Tors. It is a shapeless block, very tall on a sloping mound once built up to support the temple; and it is the home of wolves and hyenas and such who live in its crannies and scatter the whole surface of the mound with bones. You see it between the shallow undulations of the desert earth as if at the end of a vista, and very impressive. Far away Baghdad palm trees and the golden dome and four miniarets of Khadhimain: and the good desert air, inexpressibly light and unlike any other. On the ground we picked up a few shards of old blue potteries, and shreds of mother-of-pearl, but no real treasure…' [Stark 1951: 124].

The Second World War and the commencement of excavations at ʻAqar Qūf

With the strong British involvement in the affairs of Iraq the country was *de facto* an ally of Britain when war was declared in 1939. However, in May 1941 Rashid ʻAli al-Gailani led a nationalist coup against the pro-British Iraqi government of ʻAbd al-Ilah. The coup had the full support of the Axis powers and Julius Jordan, excavator of Uruk, was gaulieter of the Nazi party in Iraq[63]. A British Army force advancing from the west and through Fallujah, where the major battle of the campaign was fought, crushed the coup[64].

Iraq remained loyal to the Allies for the rest of the war and a considerable body of British military personnel (concentrated at the base at Lake Habbaniyeh) and diplomatic officers (based at the embassy) remained. One of the officials who remained was the British archaeologist Seton Lloyd. In 1940 he had conducted excavations at Tell Uqair. He had then volunteered for war work and had moved to Jerusalem. In 1941 he went back to Baghdad and was about to resume excavations when the coup took place. For a short while after the coup Seton Lloyd was appointed director general of antiquities [Lloyd 1986: 83]. When a permanent Iraqi Director General was appointed Lloyd remained as a key adviser.

Within a year of the coup, in May 1942 excavations were opened at ʻAqar Qūf. Baqir, the director of excavation for the first three seasons, wrote ʻOne reason for the selection of the site was an economic one. Owing to war-time transport difficulties it was essential that any excavating work should be

61) Roux 1966.

62) Freya Stark (1893–1993) was a noted explorer in the Near East in the second quarter of the 20th century. She published numerous books about her journeys.

63) I recall Professor Lloyd recounting in 1983 in a lecture in London the delight he felt when he returned to his office which Jordan had occupied during the coup and throwing out Jordan's paraphernalia.

64) For an archaeologist's experience of the coup see Lloyd [1986: 80–83]; for Freya Stark's account and memories see Stark [1941 and 1991: 148–160].

in the vicinity of Baghdad. Secondly the work provided an opportunity for visitors to Baghdad and Iraqis themselves to see an archaeological excavation in progress. Many hundreds of Allied troops visited the site while work was in progress[65] …' [Baqir 1944: 3]. One such visitor was William Magan, a British Indian Army intelligence officer, who was posted to Baghdad and who visited 'Aqar Qūf in October 1943:–'… Yesterday Chokra (Colonel Wood of the Guides) and a man on his staff who is an archaeologist took me to a place called Korigalzu, which dates back to the fifteenth century BC, where digging[66] is now going on. They are digging out the remains of a temple and surrounding buildings which were all built of mud brick cemented together with bitumen. Quite a lot of the walls and floors are intact and there are cuneiform inscriptions on some of the bricks, and on a few stone beds they have found door posts. The civilisation was of Persian origin. The most noticeable thing of interest is a huge brick tower about 150 feet high … we had a picnic in the open air and pleasant day. At one place we saw vast flocks of sand grouse …' [Magan 2001: 73].

The first season of excavation revealed an extensive temple complex used for the worship of Enlil and Ninlil with the ziggurat at its heart [Baqir 1944]. The second season, undertaken with the recommendation of Seton Lloyd as chair of the Excavation Committee of the Antiquities Department, unearthed the huge Kassite palace to the west of the religious sector [Baqir 1945]. Excavation and restoration work has continued at the site ever since[67].

In January 2009 the US forces in the area were seeking to establish a renovation plan for the picnic and visitors area at the site. They hoped to generate work for locals and to restore the site as a venue for relaxation and education [Tritten 2009].

Conclusions

Because 'Aqar Qūf lies so close to Baghdad and because it dominates the surrounding landscape, for centuries it has been a landmark for travellers to Baghdad. Only Nineveh and Babylon itself attracted the sort of deliberate or incidental attention that 'Aqar Qūf did. This was because early western travellers were eager to identify towns and sites which appear in the Bible. For many years early travellers mistakenly identified the ruins of the ziggurat at 'Aqar Qūf as the 'Tower of Babylon'.

Western travellers to Baghdad did not become a matter of course until the 16th century. Before then western visitors amounted to a handful of missionaries. However, for Islamic travellers and geographers the region was never 'off limits' and references to the site occur in the Abbasid period. From the 16th century onward the standard of Islamic scholarship in Baghdad declined under the Ottoman Empire, but Western interest in the region rose. This happened in parallel to the rise of commercial interest in the Indies and the establishment of large trading companies to foster trade. Early European travellers to the region were merchants. It was not until the 17th century that scientific interest in the region began to develop.

The officers and officials of two great English trading companies – The Levant Company (established in 1581) and the English East India Company (established 1600) – played a crucial role in the academic study of the near east and Iraq. Without them it is unlikely that the study of ancient Mesopotamia would have advanced as far as it has. The site was not correctly identified as the ancient capital of the Kassites until the middle of the 19th century. Thereafter it was almost 90 years before the site was excavated and a fuller understanding of the history of the site became clearer.

'Aqar Qūf provides an illustration of how all Mesopotamian sites have an history that is often neglected by archaeologists. Though not directly relevant to the remains in the ground, an

65) My father, Jack Clayden, was a private in the force stationed at Lake Habbaniyeh. He was also one of the many British soldiers who visited 'Aqar Qūf. He was told that he was looking at the Tower of Babylon.

66) Second Season of excavations.

67) See Clayden (forthcoming) for a review of the excavations and restoration work that has been conducted at the site.

Fig. 9 The ziggurat at Dūr Kurigalzu / ʿAqar Qūf as it is today (2009) having been extensively restored in the 1980s and 1990s (photograph author's own).

understanding of the post occupation of such remains does illustrate just what a complex past Iraq has.

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ORIENTALISATION ET ÉVOLUTION DES TORQUES—LES TORQUES OBSERVÉS SUR LES SCULPTURES DES SÉPULTURES DU ROYAUME UNIFIÉ DE SILLA

Saeko MIYASHITA*

Avant-propos

Les sculptures que l'on voit à Kyongju (République de Corée) dans les tombes royales ou de rang royal du royaume unifié de Silla comportent divers éléments qui attestent de l'environnement culturel international de l'époque.

Ces sculptures se trouvent à l'extérieur des tumulus comme si elles avaient pour fonction de protéger les tombes tout en manifestant l'autorité dont avaient été revêtus de leur vivant les personnages ensevelis.

Seules dix tombes de ce type ont été découvertes jusqu'à présent parmi les centaines de sépultures datant du Silla ancien au Silla unifié situées dans l'agglomération de Kyongju [閔 2007]. Certaines sculptures qui ornaient ces tombeaux se trouvent maintenant dans des musées, mais la plupart sont conservées in situ dans leur état d'origine. Nous les voyons aujourd'hui telles qu'elles étaient au moment de la construction de la tombe, si ce n'est que les icônes ont été endommagés par le vent et la neige au fil des années.

Grâce à la collaboration du Musée national de Kyongju et de l'Institut national de recherche sur les biens culturels de Kyongju et avec le concours financier apporté pendant 3 ans à partir de 2005 par le Ministère japonais de l'éducation, de la culture, des sports, des sciences et de la technologie, une équipe de chercheurs placée sous la direction de Wataru Kinoshita, directeur de recherche à l'Institut d'archéologie de Kashihara (préfecture de Nara, Japon) a pu élaborer des plans détaillés grâce à une reconstitution en 3D [木下 2009].

L'auteur a participé à ce travail de recherche qui lui a permis d'analyser en détail des sculptures difficilement visibles à l'œil nu ou sur de simples photos.

Dans cette étude, nous évoquerons plus particulièrement l'influence occidentale perceptible dans les ornements vestimentaires des bas-reliefs des divinités des douze signes du zodiaque situés autour des tumulus, plus particulièrement les accessoires qui diffèrent des coutumes décoratives traditionnelles de l'Asie de l'Est.

Les sculptures des divinités des douze signes du zodiaque ornant les tombes royales du royaume unifié de Silla

On peut voir des sculptures des divinités des douze signes du zodiaque autour des tombes royales et de rang royal datant de l'époque du royaume unifié de Silla.

L'une de ces tombes, celle de *Gujeongdong* 九政洞方形古墳 de forme quadrilatère, est sans doute celle d'une puissante famille royale.

Représentées en bas-relief, les douze divinités se succèdent dans l'ordre suivant lorsque l'on tourne dans le sens des aiguilles d'une montre autour de la partie inférieure du tumulus (fig. 1): rat, buffle, tigre, lapin, dragon, serpent, cheval, chèvre, singe, coq, chien, cochon.

Du rat jusqu'au serpent, le visage des divinités est tourné vers la gauche, le cheval apparaît de face puis de la chèvre au cochon, le visage est tourné vers la droite, de telle sorte que les divinités

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Fig. 1 Tumulus quadrilatère de *Gujeongdong*, Kyeongju (République de Corée).

Légende: ● *(présence)* / × *(absence)* / ※ *(disparu)*

Sépulture	子 (rat)	丑 (buffle)	寅 (tigre)	卯 (lapin)	辰 (dragon)	巳 (serpent)	午 (cheval)	未 (chevre)	申 (singe)	酉 (coq)	戌 (chien)	亥 (cochon)
憲徳王陵 (Heondeok)	×	×	×	×	※	※	※	※	※	※	※	×
真徳王陵 (Jindeok)	×	×	×	×	×	×	×	×	×	×	×	×
排陵 (Gwaereung)	●	●	●	●	●	●	●	●	●	●	●	●
聖徳王陵 (Seongdeok)	× ?	●?	●	●	●	●	× ?	●	●	●?	× ?	× ?
興徳王陵 (Heungdeok)	×	●	× ?	●	×	●	×	●	●	●	●	× ?
九政洞 (Gujeongdong)	●	●	●	●	●	●	●	●	●	●	●	●
景徳王陵 (Gyeongdeok)	×	×	●	×	×	●	×	●	×	●	●	×
陵旨塔 (Neungjitap)	×	●	※	●?	※	※	×	×	× ?	●	●	●
金庾信墓 (Kim Yusin)	×	×	× ?	×	×	×	×	×	× ?	× ?	×	×

Tableau 1 Présence ou absence de torques sur les sculptures des divinités des douze signes du zodiaque.

sont orientées vers l'entrée principale, ce qui atteste clairement de leur rôle de protecteur de la sépulture.

Ces douze divinités sont vêtues d'habits militaires similaires : vestes tombant jusqu'aux genoux et pantalons, ainsi que différentes armes tenues à la main. On peut distinguer autour du cou de tous les personnages des ornements dont l'extrémité est recourbée vers l'extérieur (fig. 2, 1–12). On pourrait penser qu'il s'agit du col de leurs tuniques, mais pour qui connaît les accessoires d'Asie occidentale, il s'agit plus vraisemblablement d'épais colliers métalliques, c'est à dire de torques.

Nous présentons dans le tableau ci-après les résultats de notre examen des représentations des douze singes du zodiaque dans les diverses tombes considérées.

Le motif dont l'extrémité est recourbée vers l'extérieur ne s'observe sur aucune sculpture des tombes de *Heondeok* 憲德王陵 (fig. 3, 1–5), de *Jindeok* 真德王陵 (fig. 4, 1–12), ni de *Kim Yusin* 金庾信墓 (fig. 10, 1–12) . Il est présent sur les représentations de toutes les divinités de la tombe de *Gujeongdong* 九政洞方形墳 (citée précédemment) et de la tombe de *Gwaereung* 掛陵 (fig. 5, 1–12). Concernant les tombes de *Seongdeok* 聖德王陵 (fig. 6, 1–12), de *Heungdeok* 興德王陵 (fig. 7, 1–12), de *Gyeongdeok* 景德王陵 (fig. 8, 1–12) et de *Neungjitap* 陵旨塔 (fig. 9, 1–9), ce motif s'observe, selon les tombes, sur un tiers à plus de la moitié des figurines.

Jusqu'à présent, presque aucune attention n'a été portée à ces éléments, mais ne peut-on pas imaginer que les sculptures des tombes du royaume unifié de Silla, qui a subi l'influence de divers courants culturels, comportent des torques d'origine occidentale? Examinons maintenant l'origine de ces torques.

Origines et diffusion des torques

Les torques sont des colliers formés d'une épaisse tige métallique. Les premiers torques apparaissent chez les Celtes environ 1000 ans avant JC. Ils sont représentés sur des sculptures de guerriers (fig. 11) et on en a exhumé un grand nombre qui avaient été déposés comme objets funéraires dans des tombes (fig. 12, 1–2).

Les Celtes ont contribué à l'essor de la civilisation de Hallstatt (Premier âge du fer, 1200–500 avant JC) et de La Tène (500–200 avant JC), principalement en Europe centrale. Ils faisaient du commerce avec les peuples de la région de la méditerrannée et ils ont fini par affronter l'Empire romain.

Certes le peuple celte n'est pas parvenu à fonder un grand empire comme celui de l'Asie occidentale mais son système culturel spécifique qui fait l'objet d'études archéologiques depuis le 19è siècle fait partie intégrante de la période de la formation de l'Europe avant l'introduction de la civilisation gréco-romaine et du christianisme.

Comme les Celtes n'avaient pas de système d'écriture propre, il ne nous ont pas laissé de traces écrites. Pour le monde gréco-romain, les Celtes étaient des barbares appelés Gaulois (fig. 13) et étaient considérés comme un peuple extrêmement primitif. Aujourd'hui, seules les données archéologiques nous renseignent sur la culture et l'histoire des Celtes.

Dans la mythologie celte, Cernunnos, divinité de la chasse et diverses déesses portent des torques [羽田 1998; 鶴岡 2001]. Dans une tourbière au Danemark on a découvert un chaudron votif en argent et pour une faible part en or datant du 1er siècle avant JC environ, sur lequel sont représentés diverses divinités parées de torques ou en tenant à la main (fig. 14). Le fait que les torques étaient associés à des divinités nous donne à penser qu'ils possédaient un caractère sacré chez les Celtes.

Les torques celtes sont généralement en or, en argent ou en bronze et sont, sur le devant, soit ouverts, soit fermés par une attache amovible (fig. 15). Ils étaient jadis portés par des hommes et étaient un symbole de puissance, c'est pourquoi le soldat romain vainqueur d'un guerrier celte s'emparait de son torque comme d'un trophée [Pliny, VII-28, XXXIII-15].

Pourtant, les torques ne sont pas l'apanage spécifique des Celtes : un grand nombre de torques ont été également découverts parmi des objets en bronze du Luristan en Iran, à partir de l'an mille ans avant JC environ (fig. 16).

Au début, les torques étaient portés serrés autour du cou. Peu à peu, on commença à fabriquer dans l'Empire achéménide, de somptueux torques, comme les colliers incrustés de pierres précieuses (fig. 17) et ceux ornés de têtes d'animaux (fig. 18, fig. 19).

Les torques portés à l'origine par des hommes furent ensuite adoptés comme bijoux par les femmes, comme en témoignent les colliers très ouvragés (fig. 20) portés par des femmes dans l'antiquité grecque.

On a toutefois découvert de nombreux colliers en métal parmi les objets exhumés de sépultures masculines (3è siècle avant JC – 1er siècle après JC) des Sarmates – peuple dont la sphère d'influence s'est étendue principalement autour de la côte septentrionnale de la mer Noire à partir du 4è siècle environ avant JC [江上 1991: nos. 68–71; 雪嶋 1999: fig. 40]: cela suggère que les colliers destinés aux femmes dans la civilisation grecque constituent un cas particulier dans l'évolution des torques.

Signalons également d'autres fouilles sur les sites archéologiques de *Tougozvonovo* [Rolle 1991: p. 231] dans le centre de la République du Kazakhstan qui remontent au 5è siècle ainsi que les tombes d'Üĉ Tepe [Daim F. 1992] datant des 6è–7è siècles sur la côte ouest de la mer Caspienne en République d'Azerbaïdjan (fig. 21).

Par ailleurs, on a trouvé dans l'oblast de *Rostov* sur le littoral de la mer Noire des torques en argent parmi des vestiges des XIè et XIIè siècles (fig. 22) [江上 1991: no. 217] ainsi que des statuettes de pierre des XIIè et XIIIè siècles sur lesquelles des torques sont représentés [江上 1991: no. 219]. A une période beaucoup plus récente, au XIXè siècle, on a également découvert des torques (fig. 23) [Tait H. 1976: no. 321].

Ces exemples nous amènent à supposer qu'à partir du premier millénaire av. J-C, l'extension considérable de la culture des peuples nomades à la steppe eurasiatique a contribué à accélérer les échanges avec les peuples environnants ; durant toute cette période qui a duré plusieurs milliers d'années, les peuples cavaliers parcourant de part et d'autre le continent eurasien utilisaient les torques comme objets tutélaires ou ornementaux de la vie quotidienne.

En Asie de l'Est, les premières représentations de torques apparaissent sous la dynastie Tang sur des statuettes de guerriers. C'est sous cette dynastie que l'influence de la civilisation occidentale se fait sentir davantage et l'on observe des objets semblables à des torques sur des statuettes funéraires de guerriers, hommes ou dieux (fig. 24–25). Plutôt que d'un ornement vestimentaire, il s'agit soit d'une partie de l'épaulière, soit d'une protection du cou, soit encore d'un col relevé [臺信 1991: p. 40; 尹夏清 2001: p. 62]. Mais ne peut-on pas penser qu'il s'agit plutôt de torques ou d'un de leurs avatars ?

L'histoire de la Chine présente une succession cyclique de périodes d'hostilité et de périodes d'alliance avec les peuples voisins, avec des périodes d'unification sous la férule de peuples étrangers devenus puissants. Les tribus incorporées comme mercenaires se sont graduellement transformées en factions militaires qui se soulevaient contre le pouvoir central lorsque celui-ci s'affaiblissait. La dynastie Sui et la dynastie Tang sont issues de la nation des Xianbei et leurs armées étaient bien souvent composées principalement de *barbares du Nord* appelés Hu [劉琴麗 2006].

Dans son article, Inoue [井上 2000a, b] mis en lumière l'influence occidentale qu'ont subie les armures des statuettes Tang de divinités guerrières. A leur époque, les Tang fabriquaient des armures formées d'écailles et si l'on admet que celles-ci s'inspiraient des tenues des peuples cavaliers de l'ouest, alors il ne serait pas étonnant de concevoir que les Tang portaient aussi des torques d'une tradition séculaire.

Sous la dynastie Tang, le style des armures s'occidentalise au fur et à mesure de l'intégration des Hu dans l'armée régulière. Etant donné l'absence d'ornement dans le costume masculin en Asie de l'Est, on peut supposer que les torques, parure honorifique du guerrier, ne servaient qu'à protéger le cou chez les Tang, fusionnant avec l'épaulière et perdant ainsi leur forme originelle.

On a également exhumé des torques métalliques en Chine (fig. 26). Cependant il ne fait aucun

doute qu'à l'époque Tang, les guerriers revêtus d'armure ne portaient pas de torques comme colliers.

Les sculptures des divinités des douze signes du zodiaque ornant les tombes royales du royaume unifié de Silla

De nombreux exemples de statuettes funéraires des douze divinités du signe du zodiaque se trouvent dans des tombes de l'époque Tang, mais leurs vêtements sont ceux de fonctionnaires civils (fig. 27).

Les coutumes des Tang ont été très largement adoptées à l'époque du royaume unifié de Silla [山本 2007] mais nous notons que les sculptures de divinités ornant les tombes royales examinées dans la présente étude représentent des vêtements de guerriers. Si l'introduction d'éléments culturels étrangers contribue à modifier une culture donnée, celle-ci procède à un tri parmi ces éléments, en fonction de ses spécificités propres.

Les torques qui apparaissent et se diffusent dans le nord-ouest du continent eurasien font fonction de cols d'armure ou de cols décoratifs dans les sculptures de guerriers en Chine. Dans la péninsule coréenne, les sculptures des douze signes du zodiaque que l'on trouve dans les tombes sont celles de guerriers chargés de protéger les sépultures contre toute menace. Les ornements observés sont peut-être des cols ornementaux comme ceux que l'on voit en Chine sur les sculptures des guerriers, mais il est également plausible qu'il s'agisse de torques. Depuis l'époque de Silla, il était courant pour les membres des familles royales et de l'aristocratie de porter des parures vestimentaires en or [山本 2009: pp. 16–21].

Aucune fouille archéologique n'a encore permis à ce jour de découvrir de torques mais les contacts directs avec la civilisation des peuples cavaliers nomades du nord s'étaient davantage développés qu'en Chine centrale. L'on a ainsi exhumé de la tombe 鶏林路14号墳 à Kyongju des dagues en or qui proviennent avec quasi-certitude des peuples celtes d'Occident (fig. 28).

On peut sans doute avancer qu'il existait dans le royaume du Silla unifié un terreau favorable au développement de la coutume pour les hommes de porter des torques, indépendamment de la culture chinoise.

Les sculptures des douze signes du zodiaque qui ornent les tombes royales de Kyongju comportent de nombreux éléments intéressants comme les armes et les parures personnelles.

Ainsi nous pensons qu'il est indispensable, tout en se référant aux futurs fruits de recherches archéologiques réalisées au Japon et à l'étranger, de reconstituer l'environnement social relatif à la formation de ces représentations.

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Légende des illustrations

Fig. 1 – Tumulus quadrilatère de Gujeongdong 九政洞方形墳, Kyeongju (République de Corée).
Fig. 2 (1–12) – Photographies en 3D des signes du zodiaque du tumulus quadrilatère de Gujeongdong 九政洞方形墳.
Fig. 3 (1–5) – Photographies en 3D des signes du zodiaque du mausolée royal de Heondeok 憲德王陵.
Fig. 4 (1–12) – Photographies en 3D des signes du zodiaque du mausolée royal de Jindeok 真德王陵.
Fig. 5 (1–12) – Photographies en 3D des signes du zodiaque du tombeau royal de Gwaereung 掛陵.
Fig. 6 (1–12) – Photographies en 3D des signes du zodiaque du mausolée royal de Seongdeok 聖德王陵.
Fig. 7 (1–12) – Photographies en 3D des signes du zodiaque du mausolée royal de Heungdeok 興德王陵.
Fig. 8 (1–12) – Photographies en 3D des signes du zodiaque du mausolée royal de Gyeongdeok 景德王陵.
Fig. 9 (1–9) – Photographies en 3D des signes du zodiaque de la pagode de Neungjitap 陵旨塔.
Fig. 10 (1–12) – Photographies en 3D des signes du zodiaque de la tombe du Général Kim Yusin 金庾信墓.
Fig. 11 – Statuette de guerrier, Hirschlanden (Allemagne), 6è siècle environ av. JC.
Fig. 12–1 – Torque en argent, fouilles archéologiques, Bulgarie, 2è-3è siècle.
Fig. 12–2 – Torque en argent, fouilles archéologiques, Bulgarie, 2è-3è siècle.
Fig. 13 – Partie d'un chaudron, dieu tenant un torque dans sa main, fouilles archéologiques, Danemark, 1er siècle avant JC ?
Fig. 14 – Gaulois agonisant, Rome, reproduction de la Rome antique (l'original date du 3è siècle av. JC).
Fig. 15 – Torque en bronze, Grande-Bretagne, 1er-2è siècle.
Fig. 16 – Torque en bronze, Iran, 1000–200 av. JC.
Fig. 17 – Torque pendentif, Iran, 6è–4è siècle av. JC, collection du Musée Miho, Japon.
Fig. 18 – Mosaïque d'Alexandre le Grand, fouilles de Pompeï, 1er siècle, Musée de Naples.
Fig. 19 – Torque en or orné de lions, Iran, fouilles archéologiques de Suse, 4è siècle av. JC.
Fig. 20 – Collier en or orné de lions, Grèce, 4è siècle av. JC.
Fig. 21 – Squelette d'Üĉ Tepe, 6è–7è siècle, Daim F. 1992 Taf. 15.
Fig. 22 – Torque en or et argent, Rostov (Russie), 11è–12è siècle Nizhunyaya Kozinka, Kurgan, tomb 1.
Fig. 23 – Torque bronzé, Tibet, 18è–19è siècle.
Fig. 24–1 – Statuette funéraire d'un guerrier protecteur de tombe, fouilles archéologiques de Guyuan 固原 (Chine) 658an.
Fig. 24–2 – Visage (fig. 24–1), statuette funéraire d'un guerrier protecteur de tombe, fouilles archéologiques de Guyuan, Chine, 658an.
Fig. 25 – Statuette funéraire polychrome d'un guerrier protecteur de tombe, Chine, 8è siècle.
Fig. 26 – Torque en argent, Chine, dynastie Song.
Fig. 27 – Statuette funéraire polychrome d'une divinité du zodiaque (cochon) protectrice de tombe, fouilles archéologiques d'Astana (Chine), dynastie Tang.
Fig. 28 – Dague sacrée en or, Kyeongju (Corée), 鶏林路 no.14, 5è–6è siècle.

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Fig. 28 山本 2009, p. 29.

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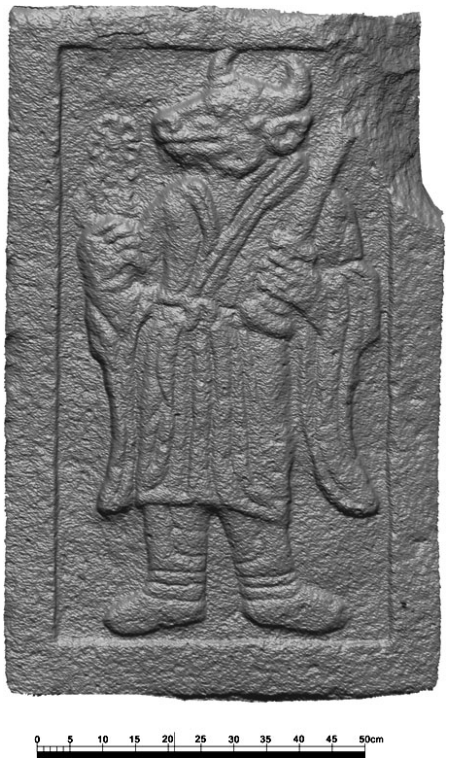

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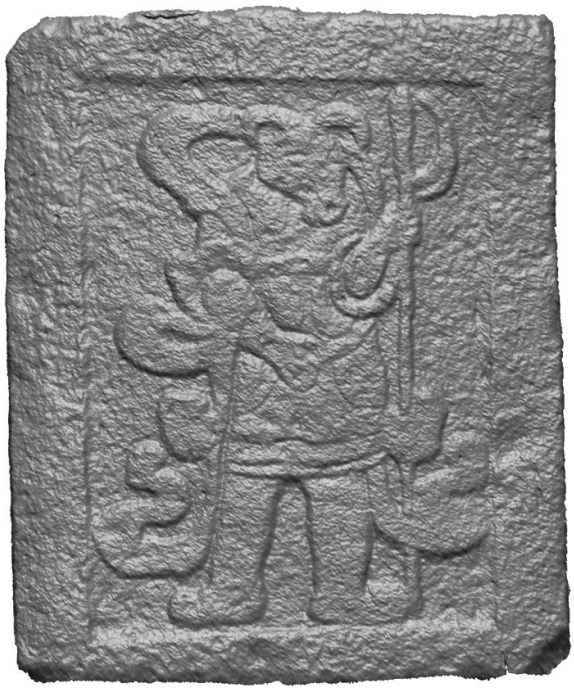

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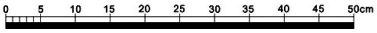

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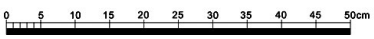

Fig. 4–10

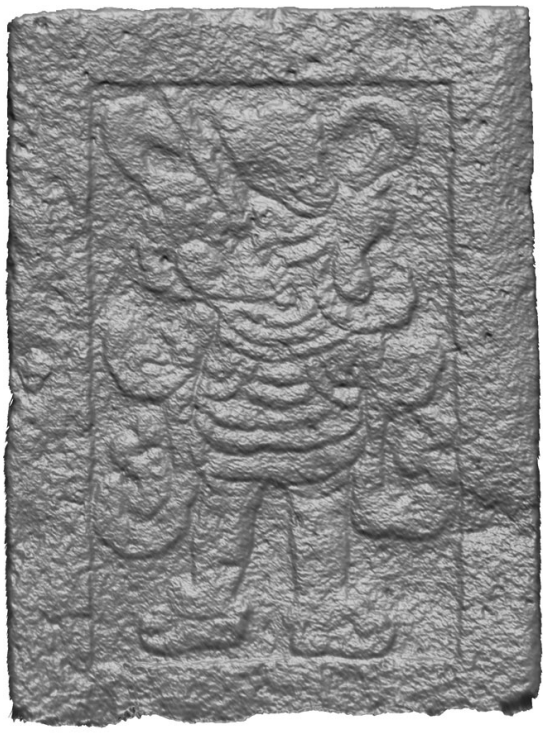

Fig. 4–11

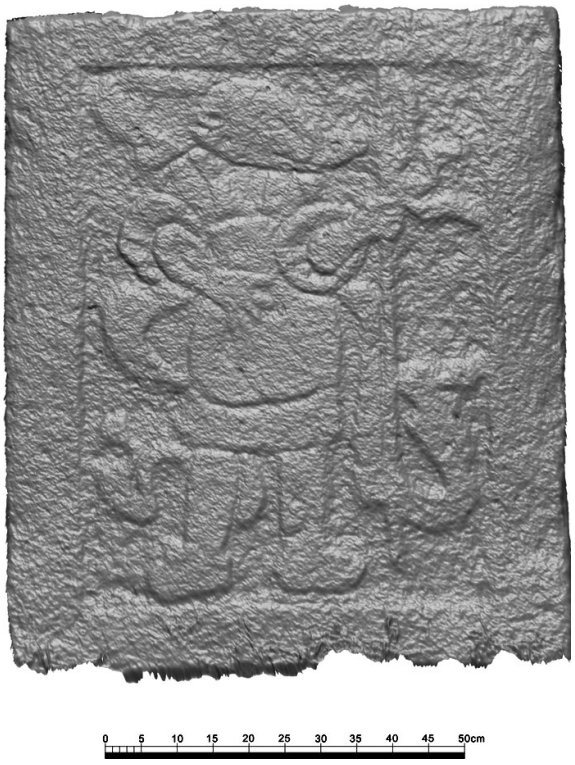

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Fig. 6–12

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Fig. 7–5

Fig. 7–6

Fig. 7–7

Fig. 7–8

Fig. 7–9

Fig. 7–10

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Fig. 7–12

Fig. 8–1

Fig. 8–2

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Fig. 8–12

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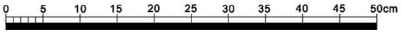


Fig. 9–5

Fig. 9–6

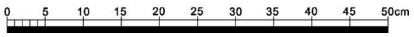
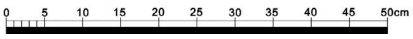


Fig. 9–7



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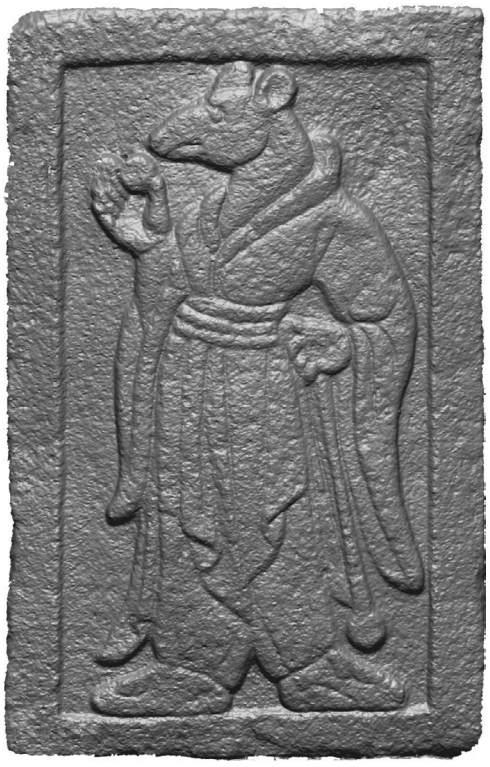
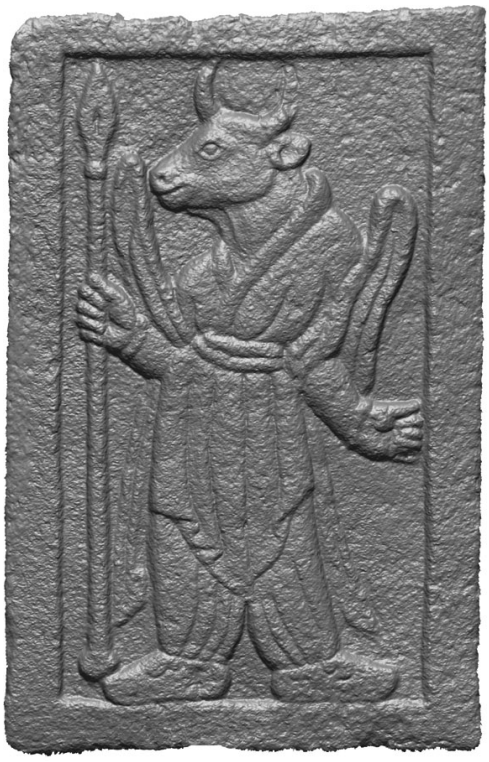
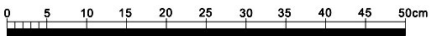


Fig. 10–1





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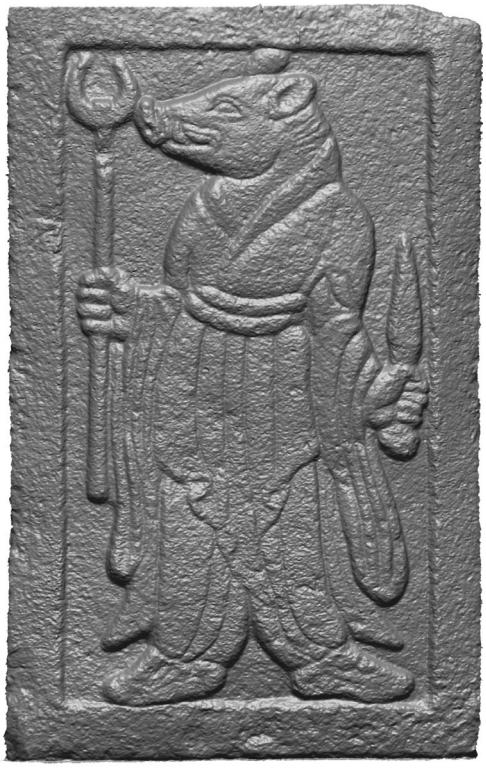


Fig. 10–12

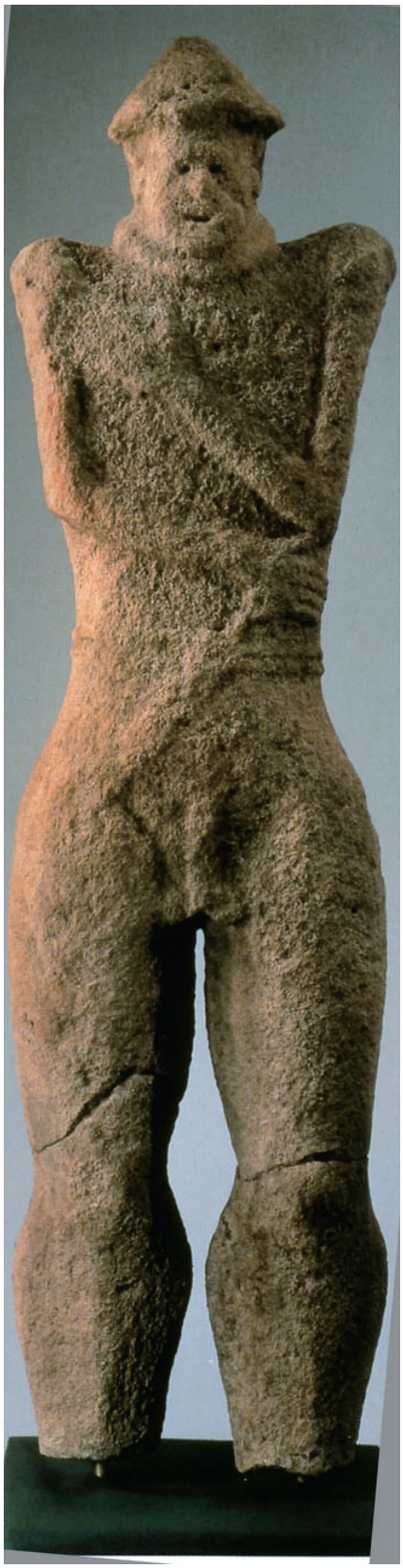


Fig. 11

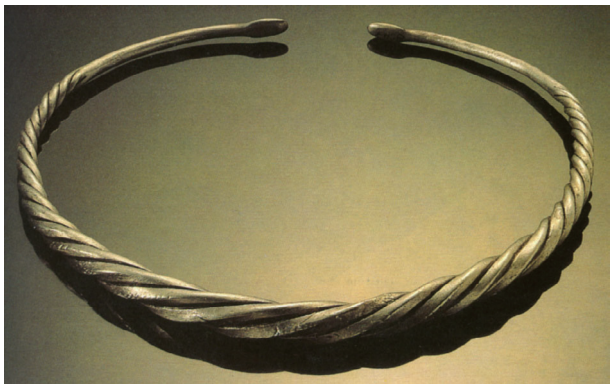
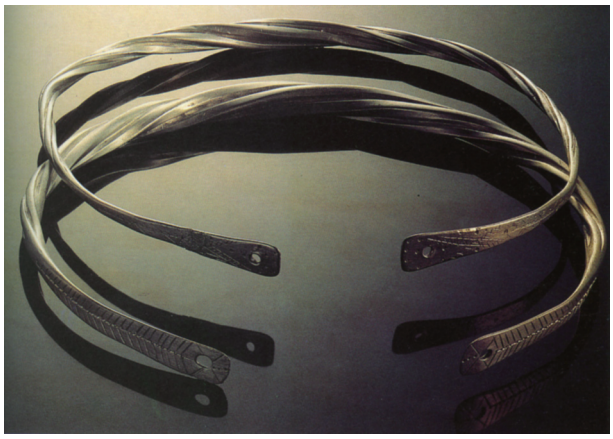


Fig. 12–1



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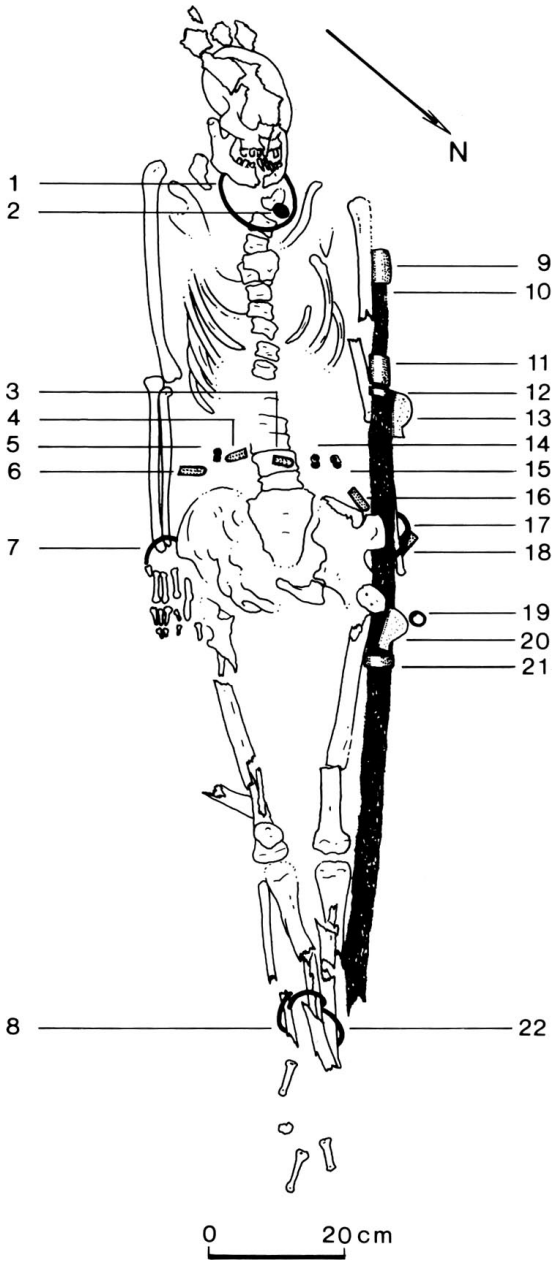

Fig. 21

Fig. 24–1

Fig. 24–2

Fig. 25

Fig. 26

Fig. 27

Fig. 28

ANIMAL ECONOMY IN THE MIDDLE EUPHRATES VALLEY: FAUNAL ANALYSIS AT THE SITE OF TELL GHANEM AL-ALI (SYRIA)

Lubna OMAR*

Introduction

The Bronze Age is a critical period in the history of the Mesopotamian region. During this phase new cultural and social development of human settlements led to the appearance of exceedingly sophisticated communities in southern Mesopotamia, while the northern parts of Mesopotamia witnessed the formation of its first estates in several centuries following the southern renowned urban centers.

The study of human occupations that emerged throughout upper Mesopotamia principally aims to demonstrate the steps of estates formation in northern Mesopotamia, and to identify the contributions of the Syrian urban-centers to the history of the region. The Middle Euphrates valley in north-eastern Syria which is known as al-Jazira (Arabic for the Island) is one of the areas that witnessed the emergence of a matrix of cities and towns during the Early Bronze Age period [Akkermans and Schwartz 2003]. Archaeological investigations conducted in al-Jazira mainly focused on the examination of large-scale occupations, which were situated along river valleys [Buccellati 1998; Orthmann 1990; Oates, Oates and McDonald 2001; Hole 2007; Schwartz and Curvers 1992; Schwartz, Curvers, Gerritsen, MacCormack, Miller and Weber 2000; Schwartz, Curvers, Dunham, Stuart and Weber 2006; Ristvet and Weiss 2005]. The archaeological and textual records from northern Mesopotamian settlements imply to the substantial role of the rural settlements in supporting the high economical demand of the populated urban centers [Clason and Buitenhuis 1998]. Therefore, the examination of the socio-economical organizations in the countryside settlements should provide us with a wider view to the progressive developments of interregional exchange among northern Mesopotamian sites, and would assist the process of reconstructing the features of economical systems during the Bronze Age period.

Tell Ghanem al-Ali is one of the small EBA settlements in the Jazira region, situated on the right bank of the Euphrates River, about 45 km south-east of the modern city of Raqqa (Fig. 1). The site has an oval shape with a long axis about 400 m stretching in the NNE-SSW direction. It is located within the Jabel-Bishri area that belongs to the greater southwest Asian arid zone marked by the line of 250 mm isohyets. This sensitive agricultural area depends on irrigation to support farming, due to the low precipitations which does not allow dry farming in the agricultural land of the area [Van Zeist and Bottema 1982; Pustovoytov, Schmidt and Taubald 2007; Bar-Matthews, Ayalon, Gilmour, Matthews and Hawkesworth 2003]. In August 2007 a joint Japanese-Syrian project commenced researching the Jabel Bishri area, and the excavations at Tell Ghanem al-Ali is part of an ongoing project investigating the Bronze Age settlements in the Jebel Bishri region. The excavations at Ghanem al-Ali started with two squares on the northeastern side of the *tell* (Fig. 2). The excavated areas revealed several stone-walled and mud-brick structures. The finds within the building area, such as hearth and pottery remains, suggest the use of these areas for domestic activities. The date of the recovered structures are still under study, however, the pottery sequence at the site strongly indicates that the layers of the site date back to the EB III period [Ohnuma 2007].

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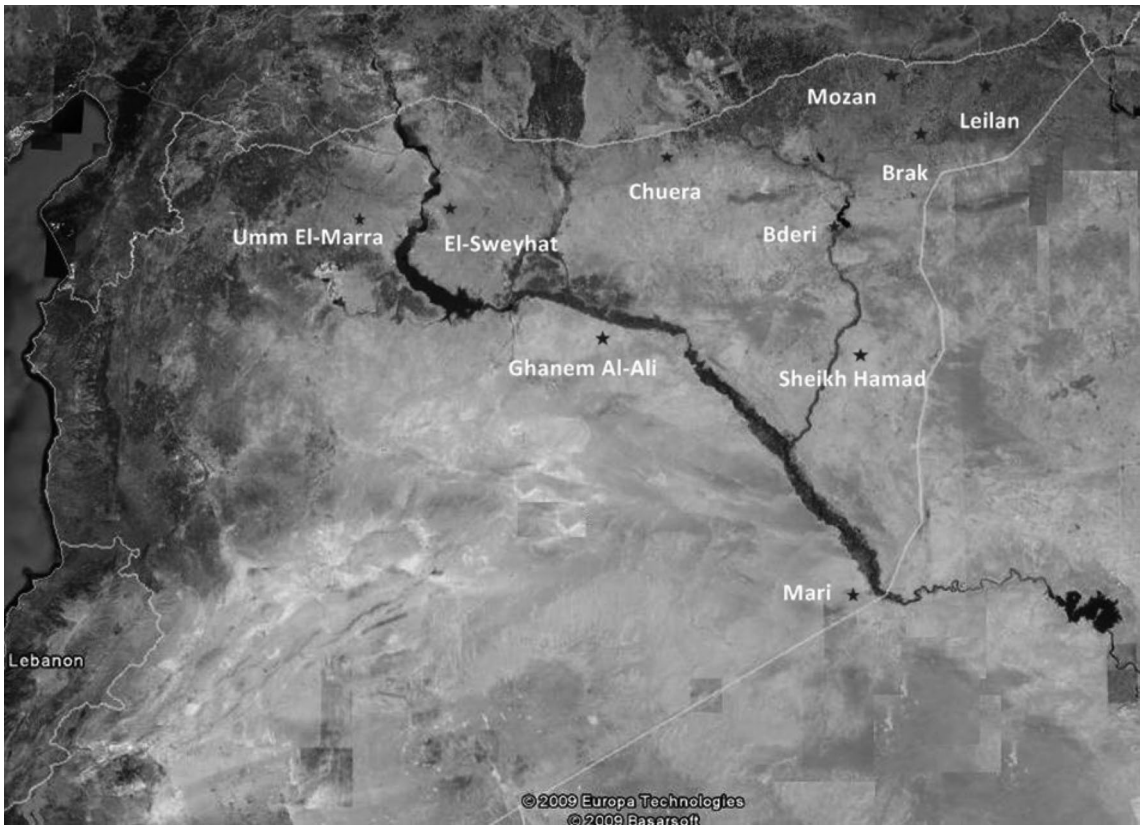

Fig. 1 Geographical map displaying some of the Bronze Age sites in north-eastern Syria.

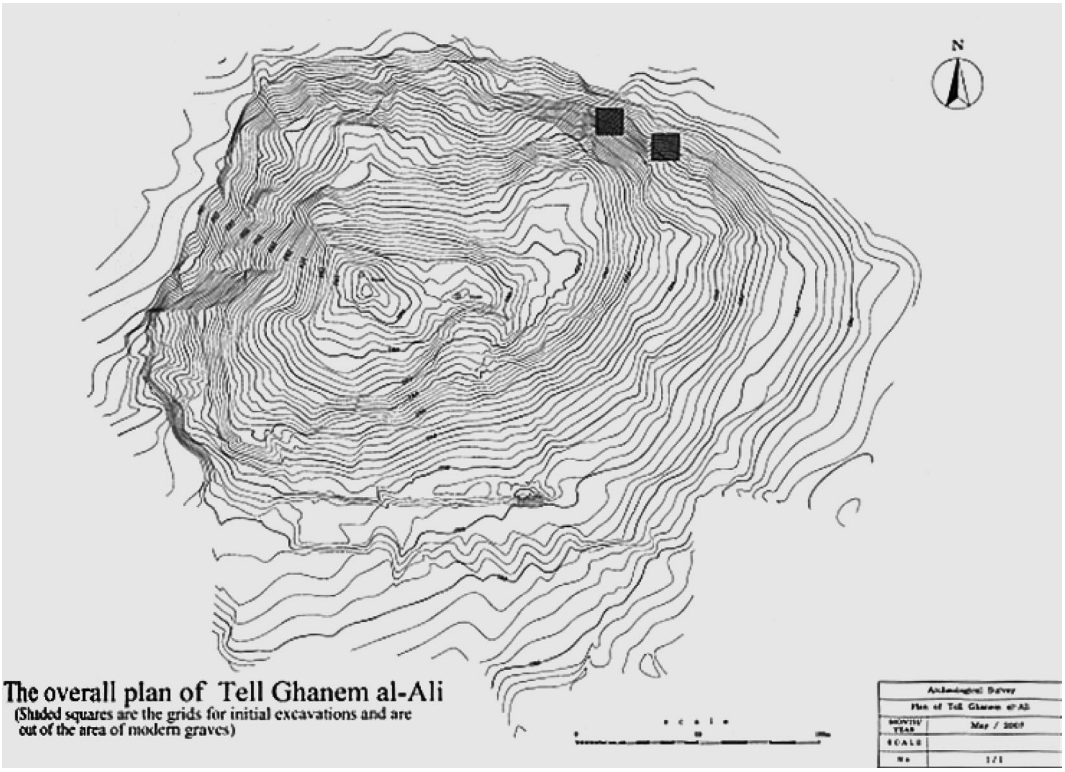

Fig. 2 Topographical map of Tell Ghanem al-Ali displaying the area of the excavated trenches [Ohnuma 2007].

The Faunal analysis

Materials

The animal bones which are incorporated in this study were retrieved during the second and the third season of excavations at Tell Ghanem al-Ali. Excavated faunal remains were collected by hand-picking, while wet sieving was applied to some of the contexts. The results of wet sieving of the excavated soil did not produce identifiable skeletal elements of small mammals or fish remains, which indicate that the collection method did not cause a substantial bias in the relative abundance of taxa at the site. The faunal assemblage belongs to the step trench area at the western side, and the squares on the northern slope of the *tell*. The preservation of faunal remains is quite good. Few elements were subject to weathering, and the mean value of unidentified fragments weight is relatively low (2.4 g).

Methods

The identification of the faunal assemblage was carried out at the field; each skeletal fragment was computed according to the coding system devised by Uerpmann [1978]. Each bone fragment was recorded with its corresponding anatomical and taxon identification, the state of preservation, approximate age and sex, and any surface modifications. The identification of sheep and goat bones is based on the morphological differences presented by Boessneck, Müller and Teichert [1964], and Prummel and Frisch [1986], for the identification of postcranial elements, while sheep and goat mandibular teeth are distinguished in following Halstead, Collins and Isaakidou 2002, and Payne 1985. The separation of equid bones depends on the morphological characteristics discussed by Uerpmann [1990] and Vila [2006a] for most of the postcranial elements; and the characteristics of the dental elements were recommended by Vila [2006a]. The analysis of the age at death of domestic animals is based on age stages defined by Silver [1969]. The measurements of postcranial skeletal elements follow the standards defined by Von Den Driesch [1976], except for equid bones measurements, which required additional criteria introduced by Eisenmann [1986]. Differences in logarithm method presented by Meadow [1999] is used to examine the size indices of the major domestic animals at the site.

The Faunal assemblage

The total number of fragment counts is 1033 (according to the number of identified specimens, NISP), and the weight of the assemblage is 11375.4 g. Within the studied sample, only 44.7% of the total number of identified fragments is attributed to species level, and 64.7% of the total weight (Tab. 1). Medium-sized animals are the most represented category within the faunal collection, and it comprises more than 78% of the bone counts. Only 0.7% of the total assemblage was not identified.

Domestic species are dominant in the assemblage. The identification of

Taxa	NIS	%	WIS	%
Cattle (*Bos Taurus*)	39	3.8	1433	12.6
Donkey (*Equus asinus*)	11	1.1	1154	10.1
Sheep (*Ovis aries*)	97	9.4	1361	12.0
Goat (*Capra hircus*)	27	2.6	407	3.6
Sheep or Goat (*Ovis/Capra*)	204	19.7	1495	13.1
Pig (*Sus scrufa var.dom*)	8	0.8	105	0.9
Equid	38	3.7	1556	13.7
Gazelle (*Gazella subgutturosa*)	13	1.3	218	1.9
Fallow deer (*Dama mesopotamica*)	1	0.1	34	0.3
Dog (*Canis familiaris*)	1	0.1	9	0.1
Hare (*Lepus capensis*)	20	1.9	8.1	0.1
Birds	3	0.3	5	0.0
Undetermined Mammals				
Large	96	9.3	1482	13.0
Medium	464	44.9	2077	18.3
Small	4	0.4	7.5	0.1
Unidentifiable bones				
Unidentified	7	0.7	23.8	0.2
Total	1033	100.0	11375.4	100.0

Tab. 1 Frequencies distribution of taxa at Tell Ghanem al-Ali according to the count and weights of fragments.

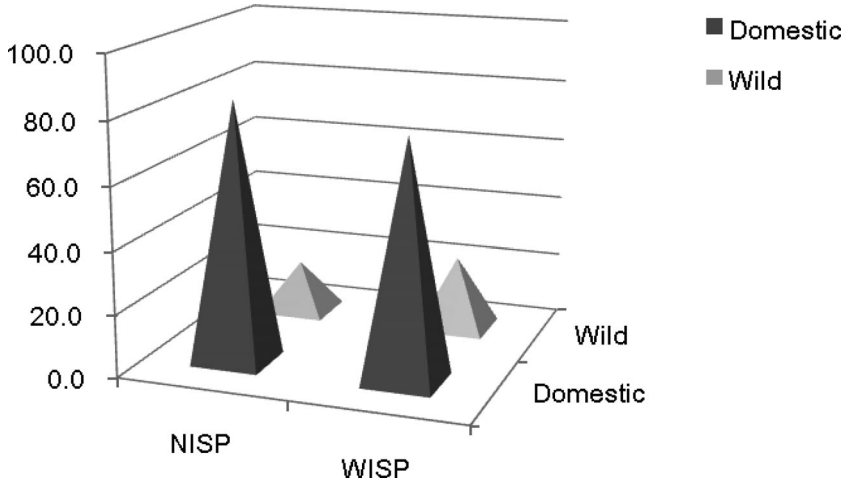

Fig. 3 Frequency of wild and domestic animals within the faunal assemblage at Tell Ghanem al-Ali.

domestic sheep, goats, cattle and pigs was primary based on the ratios of animal sizes. Approximately 84% of the total number of identified bones belongs to domestic animals, which obviously formed the main resource of animal subsistence strategy at the site (Fig. 3).

Major identified taxa

Sheep and goat

Domestic sheep and goat are the most abundant species in both count and weight of fragments. It comprises 71% of the total number of identified specimens (Tab. 2). The ratio of goat to sheep according to fragment count is 1 : 3.6. The estimation of sheep and goat ratio indicates the concentration on ovicaprid herd that mainly consisted of sheep with fewer goat individuals. The size of sheep present at the site is evaluated using the difference of logarithms method presented by Meadow [1999]. The following formula is employed to produce size indices using the breadth and depth measurements of postcranial elements of the studied species.

$$LSI = log(x) - log(s)$$

Taxa	NISP	%	WISP	%
Cattle (*Bos Taurus*)	39	8.4	1433	18.4
Donkey (*Equus asinus*)	11	2.4	1154	14.8
Sheep (*Ovis aries*)	97	21.0	1361	17.5
Goat (*Capra hircus*)	27	5.8	407	5.2
O/C (*Ovis/Capra*)	204	44.2	1495	19.2
Pig (*Sus scrufa var.dom*)	8	1.7	105	1.3
Equid	38	8.2	1556	20.0
Gazelle (*Gazella subgutturosa*)	13	2.8	218	2.8
Fallow deer (*Dama mesopotamica*)	1	0.2	34	0.4
Dog (*Canis familiaris*)	1	0.2	9	0.1
Hare (*Lepus capensis*)	20	4.3	8.1	0.1
Birds	3	0.6	5	0.1
Total	462	100.0	7785.1	100.0

Tab. 2 Frequencies of identified species according to NISP and WISP.

Where *(x)* is the value of the measured species, *(s)* represents the corresponding measurements of a standard animal. The difference in log values indicates whether the specimens are smaller or larger in size comparing with the standard measurements (Fig. 4). This displays the results of logarithm differences of measured sheep specimens based on the standard measurements of modern female sheep documented by Uerpmann and Uerpmann [1994]. The analyzed sample demonstrates two peaks of size indices: one represents the values close to the standard measurements, and the other belongs to animals bigger in size. These peaks in LSI values suggest

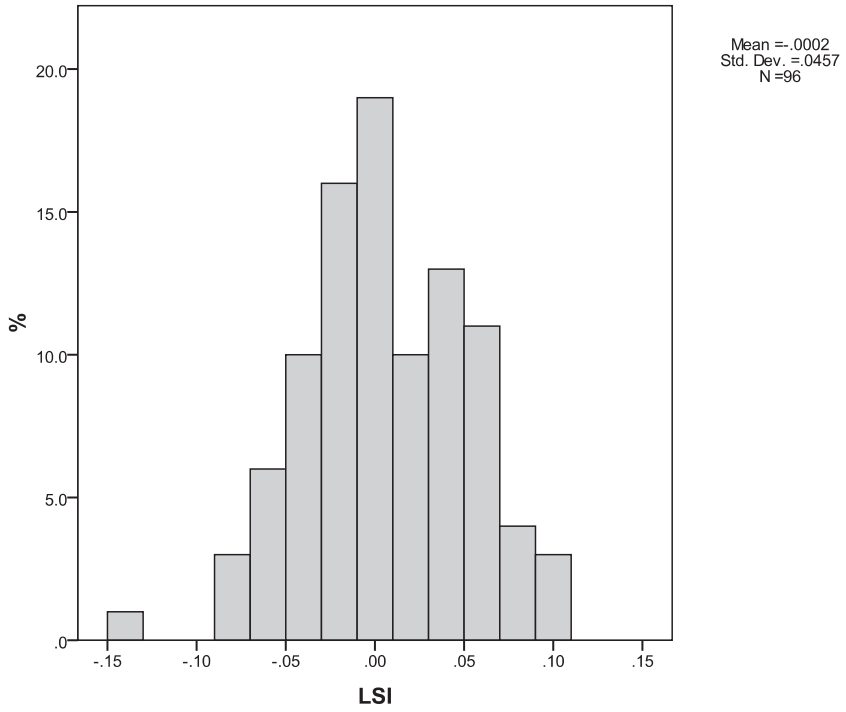

Fig. 4 Distribution of size index values of measured sheep elements at Tell Ghanem al-Ali.

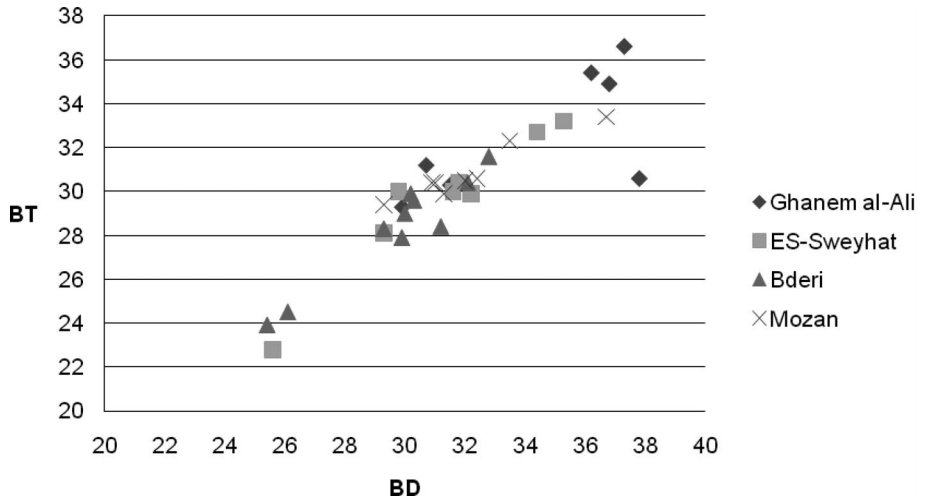

Fig. 5 Comparison of distal humerus measurements of Tell Ghanem al-Ali with those of other Bronze Age sites in the Jazira area.

the dominance of female individuals in mix herding strategies focusing on the exploitation of both female and male individuals.

The measurements of sheep humeri are used to evaluate the variances of sheep size among Tell Ghanem al-Ali and other Bronze Age sites located in the Euphrates valley and north-eastern Syria (Fig. 5). It seems that the sheep from Ghanem al-Ali are separated into two groups of individuals. This could be a possible result to the sexual dimorphism within the herd. In the measured humerus sample male individuals are equally present at the site in comparison with females. The humeri from Tell Ghanem al-Ali were bigger in size than those of other sites. The Tell es-Sweyhat sample analyzed by Weber [1997] displayed similar sizes to those of Ghanem al-Ali. The values extracted from the Tell Mozan Sample [Doll n.d.] showed a close range of measurements, but it seems

that the sheep at Tell Bderi – located in the arid southern Khabur valley – are smaller in size than the rest of the studied sample.

Cattle

Cattle (*Bos taurus*) is the third most abundant domestic animal among the faunal assemblage, and makes up about 3.8% of the faunal assemblage (Tab. 1) and about 8.4% of the total identified species animals at the site (Tab. 2). None of the fragments could have been assigned to wild cattle *Bos primigenius*. The number of the measured cattle elements is not sufficient to perform morphometric analysis. However, depending on the evaluation of the size, the majority of the fragments most likely belong to domestic individuals.

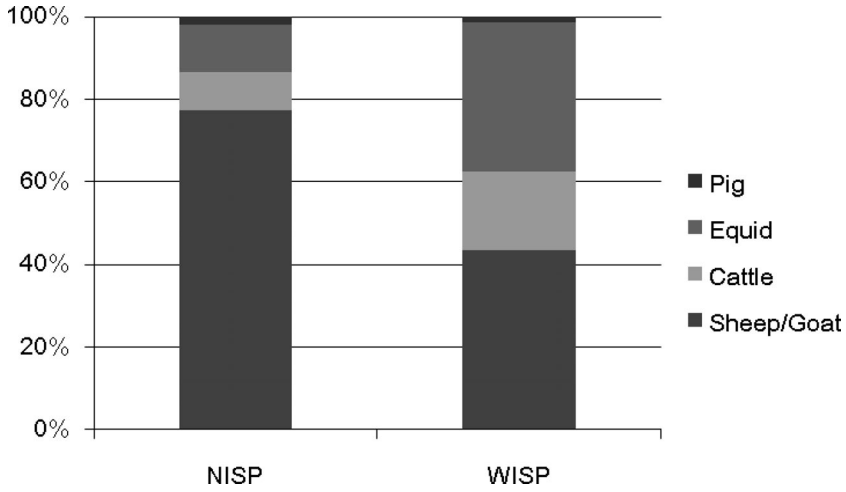

Fig. 6 Relative abundance of major identified taxa at Tell Ghanem al-Ali according to NISP and WISP.

Equid

The morphological and the morphometric analysis of the faunal remains of equid at the site indicates that *Equus Asinus* and *Equus hemionus* are both present at the site. Most probably other equid species were exploited within the Euphrates valley area [Uerpmann 1987; Vila 2006a; Weber 2008], but it was not visible at Tell Ghanem al-Ali possibly due to the small sample size, which affected the availability

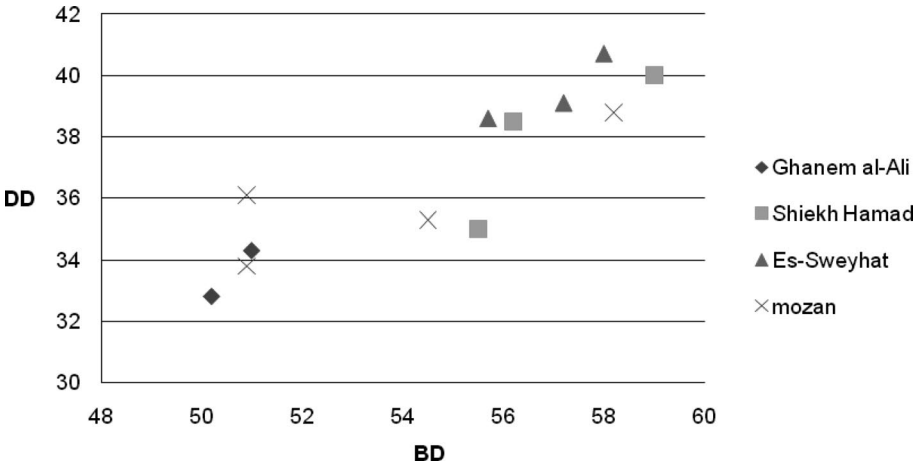

Fig. 7 Comparison of the distal tibia measurements of Tell Ghanem al-Ali equid with those of other Bronze Age sites.

of measurable fragments. The scatter plot of distal tibia breadth versus depth measurements (Fig. 7) shows that the equid individuals of Ghanem al-Ali are smaller than those from other sites in northern Syria that date back to the Early or Late Bronze Age period. The sample from Tell Mozan is closer in size to Ghanem al-Ali individuals, and they might belong to donkey (*Equus asinus*), which supposedly increased in number during the Middle Bronze Age period [Vila 2006b; Vila 1998], and had a substantial economical role in product distribution and exchange [Ismail, Sallaberger, Lebeau and Talon 1996; Clutton-Brock 1989; Clutton-Brock and Davies 1993]. The clay figurine which has been recovered at the site [Ohnuma 2007] represents a member of the equidae family (Fig. 8), and attests the cultural and the economical importance of this animal at the Ghanem al-Ali community.

Fig. 8 Equid figurine retrieved during the 2007 excavation season [Ohnuma 2007].

Minor identified taxa

Within the domestic animal range few pig and dog remains were present at the site, each species formed less than 1% of the total number of identified specimens. Nevertheless, the archaeological records provided a piece of evidence related with the presence of pig at the site, represented by a clay figurine, which might belong to wild boar or domestic pig (Fig. 9).

Of the wild species, gazelle is the second abundant species. Within the collected fragments, only one horn core was found, and it is morphologically similar to *Gazella subgutturosa*. Few cervid bones including one antler (Fig. 10) and hare remains formed the rest of the wild species assemblage at the site.

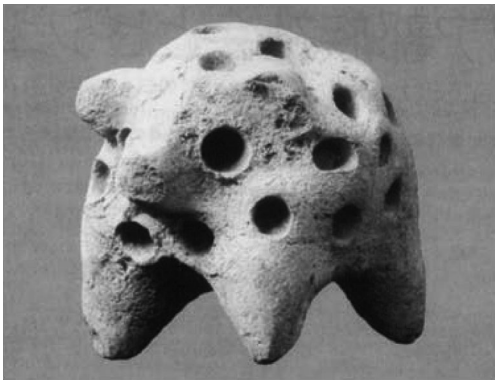

Fig. 9 Animal figurine retrieved during the 2006 excavation season.

Fig. 10 Deer antler from Tell Ghanem al-Ali.

Herd Management Strategies

Sheep/goats, cattle, donkey, and pigs are the principle domestic species at the site. Fig. 6 demonstrates their proportions according to NISP and WISP frequencies. Sheep and goats dominate the faunal assemblage, indicating the importance of the caprine herd as the main provider of meat products beside the exploitation of a variety of secondary products of each species [Sherratt 1983].

Age in months	Elements	Fusion stages	
		Fused	Unfused
I. 6–12	Scapula (d), humerus (d), radius p	27	5
II. 13–16	phalanx (p)	10	2
III. 18–28	tibia (d), metapodial (d)	18	9
IV. 30–36	femur (d), Calcaneum (p)	9	4
V. 36–42	humerus (p), radius (d), femur (d), tibia (p)	4	3

Fusion stages after Silver 1969.
P = Proximal, d = Distal.

Tab. 3 Epiphyseal stages of sheep and goats postcranial skeletal elements.

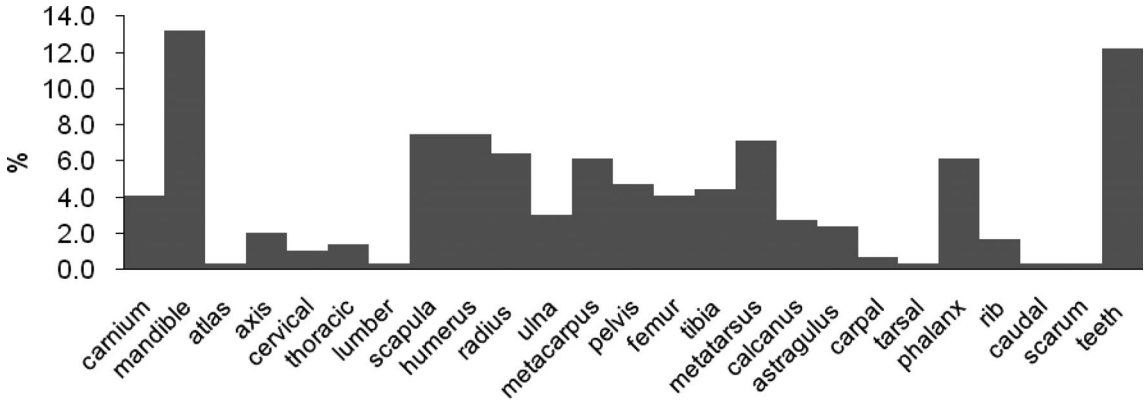

Fig. 11 Distribution of ovicaprid skeletal elements.

The estimation of the age profile of ovicaprid herd at the site was based on documenting the bone fusion stages of postcranial elements. The survival rate of sheep and goat individuals is based on fusion sequence presented by Silver [1969], and the results are presented in Tab. 3. The number of fused elements is quite high: more than 71% of the sample belongs to individuals older than one year of age, while 33.3% of the bones belong to ovicaprids over three years old. The estimation of age depending on the fusion stages of epiphyses indicates that a considerable portion of the herd at Tell Ghanem al-Ali was slaughtered after the animals reached their optimal age for meat production between 2–4 years [Helmer, Gourichon and Vila 2007; Uerpmann 1973]. About 60% of the fused elements belongs to individuals older than 2 years. The existence of adults could be interpreted as the result of secondary product exploitation at the site.

Fig. 11 demonstrates the distribution of skeletal elements of sheep and goats within the excavated structures. Since skeletal elements with both high and low meat values are present at the settlement, it suggests that the animals which comprised this sample were slaughtered within the settlement. The abundance of cranium and lower feet elements might indicate that low meat elements were discarded between the structures.

The predominance of sheep and goat fragments at the excavated trenches, as well as the presence of animals of different ages, suggests that caprine herd was the basis of the economical production system at the site. Larger animals like cattle contributed with their secondary recourses, such as dairy products and traction power, beside their high protein values. Domestic ass also was exploited in order to assist products distribution activities. We do not have clear evidence for the consumption of domestic ass as a meat resource. Yet, evidence of domestic ass meat exploitation in the Jazira region was reported by Vila [1998]. The inhabitants of the site possibly had a direct control on the caprine herd, or they had a close contact with pastoral herders who provided the population at Ghanem al-Ali with the entire herd of live stock, while they kept cattle and pigs within or close to the structure area.

Exploitation of Wild Animal Resources

The Early Bronze Age economy focused on raising domestic animals as the main source of animal products, but still the hunting of wild species continued to support the subsistence strategies at many sites within northern Mesopotamia [Weber 2006; Zeder 1988; Vila 1998; Clason and Buitenhuis 1997]. At Tell Ghanem al-Ali a similar trend is observed in wild species formed about 16.5% of the total assemblage (Fig. 3). The hunting of wild Asiatic ass in the Jazira area is well documented through the faunal analysis and pictorial evidence retrieved from other Bronze Age sites in the area [Oates 2003; Oates, Molleson and Soltysiak 2008]. Gazelle is the second exploited wild game in the assemblage followed by the cervids and smaller mammals, which suggests that the inhabitants of the site had an easy access to wild recourses, probably due the proximity of the settlement to the steppe around the Jabel Bishri area. These recourses were exploited to provide a diversity of raw materials, such as antlers and leather, beside their dietary values.

Conclusion

The examination of the faunal remains of Tell Ghanem al-Ali shows the prevalence of economical activities that relate to the socio-economical systems observed at other sites situated in the Jazera area (Fig. 12). Dietary strategies concentrated on herding sheep and goats, while cattle came in the third place. Equid formed a substantial portion of the identified species at the settlement, and it contributed to the economy of the settlement as both domestic and wild resources. The number of the pigs at the settlement was limited. This pattern of exploitation corresponds to the strategies identified within the group of middle Euphrates settlements such as Tell es-Sweyhat and Umm el-Marra [Buitenhuis 1985; Weber 1997: 2006; Weiss, Courty, Wetterstrom, Guichard, Senior, Meadow and Curnow 1993]. Based on the size of the site we could conclude that the settlement served as a small village or a small post in a strategic location which facilitated the exploitation of domestic and wild recourses. At this stage of the research, it is not possible to evaluate the function of the settlement. However, the analysis of faunal remains from the site indicates the possibility of slaughtering ovicaprid individuals within the site as well as the use of wild animals as meat supplement and source of raw materials, which suggests local consumption of acquired products. The distribution of faunal assemblage within the exposed layers at the site did not reveal the existence of specialized economic activities that could be interpreted as a result of the establishment of complex socio-cultural relations which started to emerge within several settlements in northern Mesopotamia to pave the way to the formation of early urban states within the region.

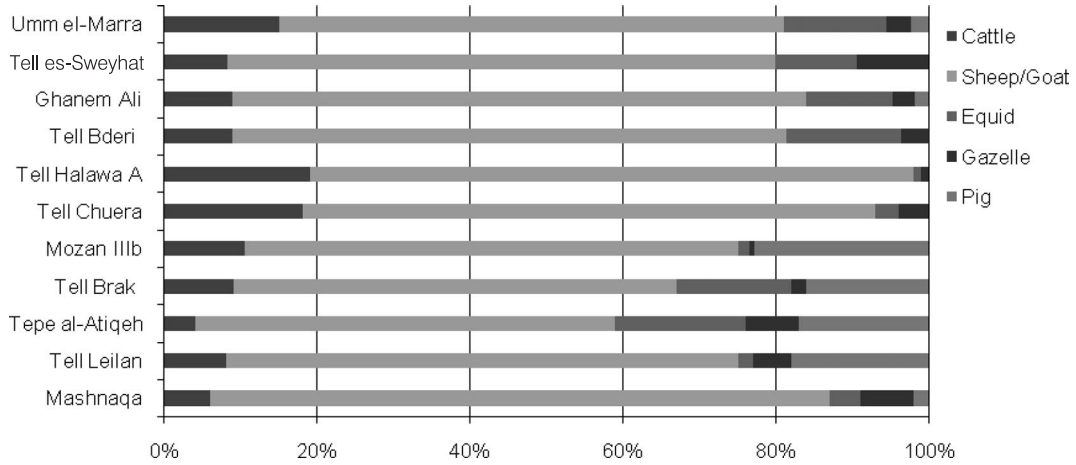

Fig. 12 Distribution of major animal taxa of northern Mesopotamian faunal assemblages.

Appendix: Tell Ghanem al-Ali's skeletal element measurements

Bos taurus

Element		min	$\bar{x}$	max	σ	No
Humerus	BT		59.1			1
Radius	Bp		103.2			1
Ph1	Bp	25.7	25.9	26.1	0.28	2
	SD	21.8	21.85	21.9	0.07	2
	Dp	27.4	27.6	27.9	0.35	2

Equus asinus

Element		min	$\bar{x}$	max	σ	No
Scapula	SLC		51			1
	GLP		74.9			1
	LG		48.3			1
Radius	1		296.3			1
	2		285.5			1
	3		33.1			1
	4		68.8			1
	5		62.3			1
	6		30.8			1
	7		63			1
	8		51			1
	9		30			1
	10		23			1
	11		13.4			1
Astragalus						
	1		48.8			1
	2		46.8			1
	3		47.9			1
	4		22			1
	5		39.4			1
	6		25.6			1
Tibia	7	32.8	33.55	34.3	1.06	2
	8	50.2	50.6	51	0.57	2

Equid

Element		min	$\bar{x}$	max	σ	No
Ph1	1		70.3			1
	2		64.1			1
	3		23.1			1
	4		36.3			1
	5		26.2			1
	6		34.8			1
	7		41.9			1
	8		36.8			1
	9		60			1
	14		33.1			1
Ph3	1		36.08			1
	2		51.3			1
	3		36			1
	4		53.3			1
	5		23.5			1
	6		35.7			1

Capra hircus

Element		min	$\bar{x}$	max	σ	No
Humerus	Bd		36.2			1
	BT		34.1			1
Radius	Bp	31.5	32.95	34.4	2.05	2
Tibia	Bd		25.9			1
Metatarsus	Bd		33.8			1
	Dd		18.4			1
Astragalus	GLI		27.2			1
	GLm		27.8			1
	DI		18.1			1
	Dm		15.7			1
	Bd		17.4			1
Ph1	GL		36.1			1
	Bp		11.8			1
	SD		9.7			1
	Bd		11.2			1
	Dp		14.2			1
	Dd		9.2			1
Ph2	GI	23.4	24.15	24.9	1.06	2
	Bp	10.7	11.8	12.9	1.56	2
	SD	7	8.13	9.4	1.21	3
	Bd	7.7	9	10.2	1.25	3
	Dp	11.6	12.65	13.7	1.48	2

Ovis aries

Element		min	$\bar{x}$	max	σ	No
Scapula	SLC	16.4	19.4	22.4	2.5	4
	GLP	30	32	35.4	2.9	3
	LG	24.9	26.1	28	1.3	4
	BG	17.7	19.5	20.7	1.6	3
Humerus	Bp		37.8			1
	Bd	29.9	33.3	37.3	3.3	7
	BT	29.3	32.5	36.6	2.97	7
Radius	Bp	32.2	34.15	36.1	2.76	2
	SD	15	16.3	17.6	1.83	2
	Bd		28.7			1
Ulna	BPC		20.3			1
	DPA		27.8			1
Metacarpus	GL		149.1			
	Bp	20.7	20.95	21.2	0.35	2

	SD		12.9			1
	Bd	22.6	23.7	24.9	1.63	2
	Dd	16.3	16.35	16.4	0.07	2
Femur	Bp			51		1
	BT			22.5		1
Tibia	Bd	23.3	25.56	28.6	1.98	5
	Dd	21.4	22.55	23.7	1.62	2
Metatarsus	GL		145.6			1
	Bp	22.6	24	25.4	1.98	2
	SD	13.6	14	14.4	0.57	2
	Bd	25.3	26.77	28.1	1.43	4
	Dd	17.3	18.05	18.8	0.65	4
Astragalus	GLI	26.9	28.38	30	1.27	4
	GLm	25.1	26.98	29.1	1.47	5
	DI	14.8	16.12	16.9	0.97	4
	Dm	15	16.6	17.2	0.9	5
	Bd	17.5	18.8	19.3	0.73	5
Ph1	GL	40.3	41.05	41.8	1.06	2
	Bp	14	14.3	14.6	0.42	2
	Dp	15.5	16.05	16.6	0.77	2
	SD	11.4	11.6	11.8	0.28	2
	Bd	12.1	13.06	13.7	0.85	3
	Dd	11.1	12.2	13.1	1.01	3
Ph3	DLS	28.1	30.35	32.6	3.18	2
	LD	21.1	23	24.9	2.69	2
	MBS	4.9	5.15	5.4	0.35	2

Gazella spp.

Element		min	$\bar{x}$	max	σ	No
Radius	Bp	25.5	27.4	28.6	1.66	3
Metacarpus	Bd		24.1			1
	Dd		15.7			1
Ph1	GI		36.9			1
	Bp		10.7			1
	SD		7.7			1
	Bd		10.1			1
	Dp		13.6			1

Lepus capensis

Element		min	$\bar{x}$	max	σ	No
Ph1	GL	16.1	16.58	18.3	1.8	5
	Bp	3.5	4	4.5	0.38	5
	Bd	2.8	3.04	3.1	0.15	5

For abbreviation see Von den Driesch 1967.
The method of equid measurements in this appendix is in accordance with Eisenmann 1986.

Radius
1= Greatest length, 2= Lateral length, 3= Smallest Breadth, 4= Proximal breadth, 5= Proximal articular breadth, 6= Proximal articular depth, 7= Distal breadth, 8= Distal articular breadth, 9= Greater distal articular depth, 10= Breadth of radial condyle, 11= Breadth of ulnar condyle.

Astragalus
1= Greatest length, 2= Medial length of trochlea, 3= Greatest Breadth, 4= Trochlear breadth, 5= Distal articular breadth, 6= Distal articular depth, 7= Medial depth.

Tibia
7= Distal breadth, 8= Distal depth

First phalanges
1= Greatest length, 2= Anterior length, 3= Smallest breadth, 4= Proximal breadth, 5= Proximal depth, 6= Distal supra-articular breadth, 7= Greatest length of trigonum phalangis, 8= Smallest length of trigonum phalanges, 9= Posterior length, 10= Medial supratuberosital length, 11= Lateral supratuberosital length, 12= Medial infratuberosital length, 13= Lateral infraatuberosital length, 14= Distal articular breadth.

Third phalanges
1= Anterior length, 2= Greater anteroposterior diameter, 3= Height, 4= Greatest breadth, 5= Articular anteroposterior diameter, 6= Distal circumference.

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NOTES D'ARCHÉOLOGIE LEVANTINE XXI. TRAVAUX ARCHÉOLOGIQUES À TELL GHAMQA AU SUD DE TARTOUS EN 1926[1)]

Michel AL-MAQDISSI*

Résumé
Présentation de la documentation disponible dans un carnet d'inventaire, rédigé par Maurice Dunand en 1926 et conservé dans ces Archives à l'Université de Genève. Il s'agit d'une figurine en terre cuite et des séries de tessons qui datent respectivement du Bronze récent, de la période phénicienne et de l'époque romaine.

Mots clefs : Maurice Dunand, Ghamqa, figurine, sondage, stratigraphie, Bronze récent, phénicien, romain, céramique.

I. Introduction

Dans une note publiée dans ce journal en 2008[2)], j'ai essayé de présenter un rapport préliminaire touchant les travaux réalisés sur le site de Tell Ghamqa en 2005, dans le cadre d'une mission syrienne de sauvetage dirigée, sous ma responsabilité, par Wurud Ibrahim et Roxane Kasouha. En même temps, j'ai présenté l'ensemble de la bibliographie qui mentionne ce site depuis la première publication d'Ernest Renan qui date de 1864[3)], jusqu'aux récentes études publiées par Jean-Paul Rey-Coquais[4)] et Javier Teixidor[5)] dans les années soixante-dix du siècle précédent.

L'étude de la séquence stratigraphique du site confirme la présence d'une succession importante de phases d'occupation qui va du milieu du troisième millénaire av. J.-C. jusqu'à la période ottomane avec une stratification très marquante datée du premier millénaire av. J.-C.

II. Analyse des donnees

Depuis cette fouille récente nous avons appris la présence d'un document très important qui se trouve à l'université de Genève, dans les archives du grand savant français Maurice Dunand.

Il s'agit d'un carnet d'inventaire[6)] rédigé vraisemblablement en février 1926 par Dunand lui-même à l'occasion de la fouille du *favissa* du temple phénicien d'Amrith[7)]. Ce document comporte une description sommaire de l'ensemble des éléments de sculptures en pierre trouvés au cours des

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1) Mes remerciements les plus sincères vont à Bassam Jamous, Patrick Maxime Michel Z., Antoine Cavigeaux et Denis Genequant.

2) AL-Maqdissi 2008.

3) Renan 1864 : pp. 19–20, 46.

4) Rey-Coquais 1974.

5) Teixidor 1979.

6) Il porte le titre suivant "*archéologie, Catalogue des corrections de Mons. M. Dunand–février 1926*".

7) A propos de ce monument, *cf.* principalement Dunand et Saliby 1985.

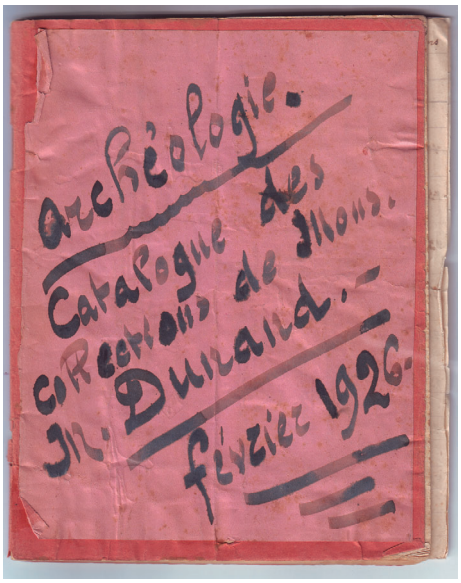

Fig. 1 Tell Ghamqa: Carnet d'inventaire des objets d'Amrith et de Tell Ghamqa conservé dans les Archives de Maurice Dunand à l'université de Genève (Suisse).

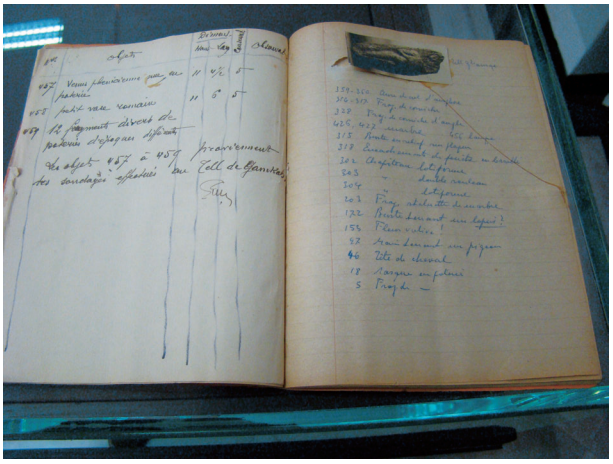

Fig. 2 Tell Ghamqa: Les deux dernières pages inscrites du carnet d'inventaire des objets de Tell Ghamqa conservé dans les Archives de Maurice Dunand à l'université de Genève (Suisse).

travaux réalisés et conservées alors entre les deux Musées de Damas et de Beyrouth[8]. En même temps, Dunand dresse dans les deux dernières pages (fig. 2) de cet inventaire trois numéros supplémentaires (nos. 457–459) donnant la description d'une série d'objets provenant d'une fouille qu'il a effectuée lui-même en 1926 sur le site Tell Ghamqa.

Cette information sera confirmée par une note publiée à Paris par Charles Virolleaud dans les *Comptes-rendus de l'Académie des Inscriptions et des Belles Lettres*, alors qu'il était directeur du service des Antiquités de Syrie au temps du mandat français[9]. Cette note met en évidence la documentation disponible du sondage réalisé par Maurice Dunand à Tell Ghamqa dans le cadre de son activité dans cette région au moment de la découverte des sculptures d'Amrith.

III. Description du document

Carnet d'inventaire de petite dimension (22 cm de long sur 17 cm de large) avec 40 pages inscrites et 49 non inscrites. L'encre utilisée est de couleur brune foncée à l'exception de la derrière page rédigée par une encre de couleur bleu claire.

La trente neuvième page inscrite (fig. 3) comporte un tableau de trois numéros d'inventaire avec une description sommaire comme suit :

«N° 457 : Venus phénicienne nue en poterie, Haut(eur) 11, Larg(eur) 4,5 conservat(ion) 5.

N° 458 : Petit vase romain, Haut(eur) 11, Larg(eur) 6 conservat(ion) 5.

N° 459 : 12 fragments divers de poterie d'époques différentes».

A la fin de la page, Dunand note les deux lignes suivantes : «Les objets 457 à 459 proviennent

8) Pour une première publication de ce matériel, *cf.* Dunand 1944–1944 et Dunand 1946–1948. Par contre pour une étude iconographique, *cf.* Jourdain-Annequin 1992.

9) Virolleaud 1926: p. 57.

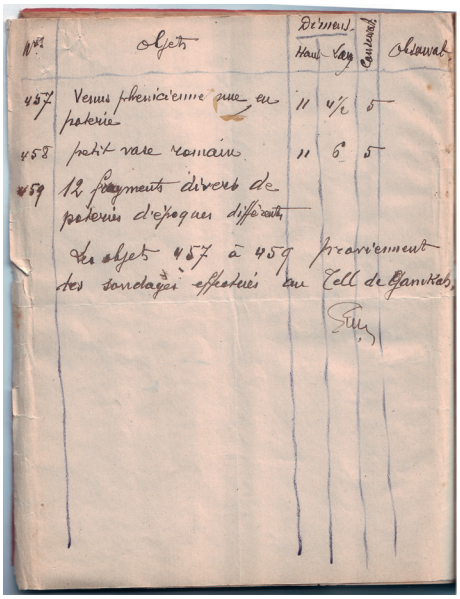

Fig. 3 Tell Ghamqa: La trente neuvième page inscrite du carnet d'inventaire des objets de Tell Ghamqa conservé dans les Archives de Maurice Dunand à l'université de Genève (Suisse).

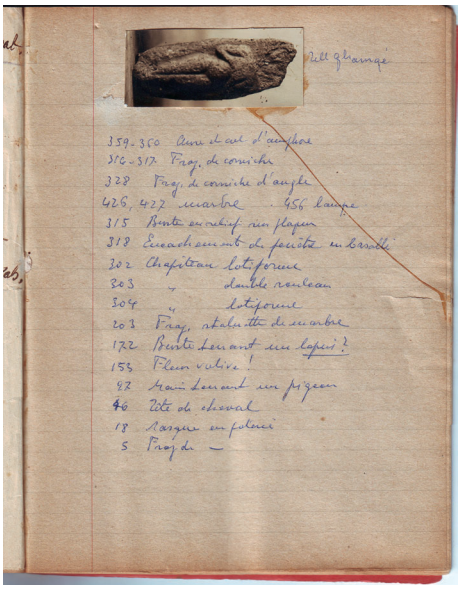

Fig. 4 Tell Ghamqa: La quarantième page inscrite du carnet d'inventaire des objets de Tell Ghamqa conservé dans les Archives de Maurice Dunand à l'université de Genève (Suisse).

des sondages effectués au Tell de Gamkeh.» et achève ainsi la liste des objets par sa signature:

La quarantième page inscrite (fig. 4) comporte en haut une photographie (noir et blanc), collée horizontalement, d'une figurine avec la mention à côté de la provenance «Tell Ghamqé» et de seize lignes qui résument l'inventaire présenté dans les pages qui précédent ces deux pages. Cette page comporte un type d'écriture différente de la première et donne des numéros sélectifs qui indiquent certaines catégories d'objets inventoriés dans ce carnet.

IV. Datation

La photographie collée à la quarantième page inscrite (fig. 5) présente une plaquette d'Astarté. Il s'agit d'un objet en terre cuite dont la partie supérieure est cassée. Il représente un personnage féminin debout soutenant les seins. Le corps est nu et les bras et les jambes sont bien exécutés. La pate est de couleur claire avec dégraissants foncés de petite dimension.

Une étude détaillée de cette photographie montre qu'il s'agit d'un objet qui date du Bronze récent ou du début de l'âge du Fer avec des comparaisons à Ras Shamra-Ugarit[10], à Tell Sianu[11], à Meskéné-Emar[12], à Munbaqa[13], dans la région d'Amurru[14]... .

En plus, Dunand note la présence d'un petit vase de l'époque romaine et de douze fragments de poterie, probablement ceux cités par Virolleaud et qui portent un décor de cercles concentriques.

La date de ces trésors nous échappe, mais nous pensons qu'il s'agit des importations chypriotes

10) *Cf.* par exemple Monloup 1987.
11) Ishak 2009.
12) Caubet 1982.
13) *Cf.* d'une manière générale Czichon et Werner 1998: pl. 155–166.
14) Gubel 1982.

Fig. 5 Tell Ghamqa: La photographie de la figurine collée horizontalement à la quarantième page inscrite du carnet d'inventaire des objets de Tell Ghamqa conservé dans les Archives de Maurice Dunand à l'université de Genève (Suisse).

du Fer II[15], ou bien des types de vases cycladiques attestés largement en Syrie dans les sites de Ras el-Bassit, Tell Sukas, Tyr[16].

V. Conclusion

Malgré l'état très préliminaire de la documentation dont nous disposons, les informations livrées de ce sondage nous donnent des indications stratigraphiques nouvelles car elles nous obligent à modifier le tableau chronologique déjà disponible comme suit :

Ghamqa 0	Surface récente
Ghamqa I	Ottomane
Ghamqa II	Romaine Tardive (Byzantine)
Ghamqa III	Romaine
Ghamqa IV	Hellénistique
Ghamqa V	Fer III (Phénicienne tardive)
Ghamqa VI	Fer II
Ghamqa VII (b)	Bronze récent
Ghamqa VII (a)	Bronze moyen II
Ghamqa VIII	Bronze ancien IV
Ghamqa IX (?)	Bronze ancien III

De même, l'existence de la plaquette nous amène à envisager la présence d'une occupation durant la période cananéo-phénicienne, ce qui sera très important pour comprendre la situation et la distribution des sites durant la deuxième moitié du deuxième millénaire av. J.-C. dans la plaine de 'Akkar et au pays d'Amourru dont la ville principale sera Sumur, l'actuelle Tell Kazel.

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15) Par exemple les productions *White Paintes I ou V, cf.* Yon 1976: fig. 43.
16) *Cf.* d'une manière générale, Courbin 1982 avec les citations pour les autres sites.

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VII. Abreviations

BAH Bibliothèque Archéologique et Historique
BMB Bulletin du Musée de Beyrouth
CMO Collection de la Maison de l'Orient
CRAI Comptes Rendus de l'Académie des Inscriptions des Belles-Lettres
RÉS Répertoire d'Épigraphie Sémitique
RSOu Ras Shamra-Ougarit

NOTES D'ARCHÉOLOGIE LEVANTINE XXIII. TOMB FROM THE MIDDLE BRONZE AGE II AT TELL GHANEM ALI

(Preliminary Report)

Michel AL-MAQDISSI*

I. Introduction

The Syrian-Japanese excavations carried out in the northern part of the Jebel Bishri in the Raqqa Governorate have yielded a very wealthy array of finds relating to the pre-Classical period. Excavations and surveys in the Euphrates valley and on the Jebel Bishri plateau have confirmed the extent of occupation in the second half of the third millennium BC; very varied structures have been brought to light. Thus, the set of necropolises unearthed on the cliff overlooking the Euphrates in the Abu Hamid[1] area (*etc.*) and the soundings made at Tell Ghanem Ali have enabled researchers to study the relations between two very different worlds: that of the sedentary populations of the valley and that of the nomads of the plateau. Simultaneously, fieldwork carried out deep inside the Jebel Bishri Plateau and the clearing of several tumulus-type necropolises have brought much information on the funerary traditions of the Middle Bronze Age and more particularly those related to the Sutaean nomads mentioned in the 18th century BC Mari archives[2] and in the Middle Assyrian tablets of the *dunnu* of Tell Sabi Abyad on the Balikh[3].

II. The Tell Ghanem Ali Excavations

Soundings carried out by the joint expedition in different areas of Tell Ghanem Ali have clearly revealed the importance of this site during the third millennium BC, its major period of development being during the EB III-IV. Excavated domestic structures have shown that sedentism was a major characteristic of this period, and was undoubtedly related to the activities carried out then in the Euphrates Valley. The site is located in a key area, at the intersection of two cultural influences: that of sites from the Middle Euphrates valley and that of settlements belonging to the Mari Kingdom[4] (the northern limits of Mari being in the Khanouqa near Halabiyeh[5]; Tell Thadhiyan, probably Habattum, being the southernmost city of the kingdom neighboring Mari to the north).

If one studies in detail this site's stratigraphy, one can be astonished by the absence of Middle Bronze Age structures. Only an individual tomb in square 6 of the site's northern slope was cleared and belongs to the MB.

III. Description of the Middle-Bronze II Tomb

The grave was discovered immediately under the topsoil of square 6 (Fig. 1). It is a simple structure

* DGAM – Damascus USJ-Beyrouth

1) Falb, Krasnik, Meyer and Vila 2005.
2) Kupper 1957.
3) Wiggermann in preparation and Duistermaat 2008.
4) Margueron 2004 and Margueron 2008.
5) Montero Fenollós, Márquez Rowe and Caramelo 2008.

Fig. 1 Tell Ghanem Ali: General view of Square 6 with the Middle Bronze Age II Tomb.

Fig. 2 Tell Ghanem Ali: EB IV structures in the square 6.

(dimensions: 1 m × 1.2 m) comprising a skeleton in fetal position, associated with funerary goods which consisted of only pottery vases.

The grave was made by digging a pit that damaged EB IV structures (Fig. 2). The body was then placed into the pit, together with the pottery.

These grave goods, found to the south of the skeleton, can be divided into two sets (Fig. 3): the western set includes a dish (Fig. 4: right), an S-profiled juglet (Fig. 4: left) and a carinated one; the eastern set of grave goods contains three disk bases belonging to jars and the remains of a fourth

Fig. 3 Tell Ghanem Ali: Middle Bronze Age II Tomb in the square 6.

Fig. 4 Tell Ghanem Ali: Pottery from the Middle Bronze Age II Tomb.

jar[6)].

This type of structure is attested on many Syrian sites. Similar graves have been discovered at Hama[7)], Ras Shamra-Ougarit[8)], Hammam el-Turkmann-Zalpa[9)], Tell Mardikh-Ebla[10)] and at other sites.

6) *Cf.* in general Riis and Buhl 2007, Fugmann 1958, Al-Maqdissi 1994, and Nigro 2002.
7) Fugmann 1958, and Riis and Buhl 2007.
8) Al-Maqdissi 2008.
9) Thissen 1988.
10) Baffi Guardata 1988.

IV. The Date of the MB Tomb

The pottery has many parallels in the upper Euphrates[11]. The dishes and the two juglets belong to types attributed to the Middle Bronze Age II (1800–1600 BC) [12]. Likewise, disk bases are part of the same tradition and can be attributed to the same chronological interval.

V. Conclusion

The Middle Bronze Age II tomb of Ghanem Ali is a unique document whose interpretation is still difficult. What can be emphasized is that such a burial is to be related to sedentary populations. The grave proves that a sedentary village community was living in the area, no doubt taking advantage of the fertile soil. This community must have been living on the exact border between Mari-*ah Purattum* and Tell Thadhiyan (probably identified with Habattum).

VI. Abbreviations

BAH	Bibliothèque Archéologique et Historique
PIHANS	Publications de l'Institut historique-archéologique néerlandais de Stamboul
SVA	Schriften zur Vorderasiatischen Archäologie
TMO	Travaux de la Maison de l'Orient

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11) Dornemann 2007.
12) *Cf.* in general Braemer and Al-Maqdissi 2002, Nigro 2002, and Faivre and Nicolle 2007.

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PRELIMINARY REPORTS OF THE SYRIA-JAPAN ARCHAEOLOGICAL JOINT RESEARCH IN THE REGION OF AR-RAQQA, SYRIA, 2009

INTRODUCTION

Michel AL-MAQDISSI*
Katsuhiko OHNUMA**

Ever since the start of the field works in the region of Ar-Raqqa in February of 2007, the Syria-Japan Archaeological Joint Research in the Bishri Region has conducted thirteen times of works in the field until December of 2009 as follows:

The 1st season of field works: February 15 to March 3, 2007
The 2nd season of field works: May 6 to 30, 2007
The 3rd season of field works: August 1 to 29, 2007
The 4th season of field works: November 8 to December 12, 2007
The 5th season of field works: March 3 to April 5, 2008
The 6th season of field works: April 25 to June 6, 2008
The 7th season of field works: October 10 to December 2, 2008
The 8th season of field works: February 23 to April 3, 2009
The 9th season of field works: April 28 to June 12, 2009
The 10th season of field works: August 1 to September 9, 2009
The 11th season of field works: October 11 to 25, 2009
The 12th season of field works: November 17 to 21, 2009
The 13th season of field works: December 24 to 30, 2009

Composed of 18 research teams listed below, specialized in natural and cultural sciences, this multi-diciplinary Syria-Japan Archaeological Joint Research has worked in the region of Ar-Raqqa and in Japan, in order to clarify how ancient pastoral nomadic tribes contributed to the formation of agriculture-based urban societies along the Middle Euphrates, North-East Syria.

1) Supervising Team "Archaeological Research in West Asia based on Integrated Research Methods" (Director: Katsuhiko Ohnuma)
2) Research Team "Relationship between the Behavioral Evolution and the Process of Sedentalisation during the Palaeolithic Period in West Asia" (Director: Hiroyuki Sato)
3) Research Team "Expansion Process of Food Production Economy and Formation of Community in the Arid Area of West Asia" (Director: Yoshihiro Nishiaki)
4) Research Team "A Comparative Study on the Burial Patterns of the Pastoral Nomadic Tribes" (Director: Sumio Fujii)
5) Research Team "A Study of the Process of Urbanization in West Asia" (Director: Akira Tsuneki)
6) Research Team "Integrated Research on the Assyrian Civilization in Northern Mesopotamia" (Director: Hirotoshi Numoto)
7) Research Team "Establishment and Development of the Civilization of Sumerian Writing

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System" (Director: Kazuya Maekawa)
8) Research Team "Development of City-States and the Tribes in West Asia" (Director: Akio Tsukimoto)
9) Research Team "Environmental History of the Middle Euphrates based on Environmental Geology, Environmental Chemistry and C14 Dating" (Director: Mitsuo Hoshino)
10) Research Team "Biological Features of the Ancient Inhabitants of the Middle Euphrates and its Peripheral Region" (Director: Hidemi Ishida)
11) Research Team "Zoological and Botanical Archaeology in the Prehistoric to the City-State Societies of West Asia" (Director: Hitomi Hongo)
12) Research Team "A Study on the Styles and the Genealogy of Masonry Techniques in Ancient West Asian Architecture" (Director: Yasuyoshi Okada)
13) Research Team "Basic Structure and Re-arrangement of the Bishri Mountains Tribal Culture in the Ancient Oasis City, Palmyra" (Director: Saeko Miyashita)
14) Research Team "Developing Data-base of Archaeological Sites of West Asia: An Investigation through the Analysis of Satellite Images" (Director: Ken Matsumoto)
15) Research Team "An Archaeological Study on the Nomadic Tribal Communities in Northern Eurasia: A Comparative Study" (Director: Shu Takahama)
16) Research Team "A Study of the Process of Urbanization in the Steppical Border of Syria in the Third and Second Millennia B.C." (Director: Michel Al-Maqdissi)
17) Research Team "A Study of the Bronze Age Pottery Obtained by the Syria-Japan Archaeological Joint Research in the Region of Ar-Raqqa"(Director: Michel Al-Maqdissi)
18) Research Team "New Perspectives of Anthropology and History towards Arab Tribal Systems" (Director: Masayuki Akahori)

The members who participated in the thirteen times of the joint works are as below:
Syrian Party: Michel Al-Maqdissi (Superviser), Anas Al-Khabour (director), Shaker Al-Shbib (director), Ahmed Sultan (Director), Mohamad Sarhan (Director), Ayham Al-Fahry, Mahmmod Al-Hassan, Ibrahim Musa, Mohamad Ali Jajan, Mohamad Ibrahim, Aed Issa and Ibrahim Khalil.
Japanese Party: Katsuhiko Ohnuma (Superviser and Director), Hiroyuki Sato, Masanobu Tachibana, Yoshihiro Nishiaki, Tomoyasu Kiuchi, Hiroto Nakata, Seiji Kadowaki, Masashi Abe, Sumio Fujii, Takuro Adachi, Kae Suzuki, Kazuyoshi Nagaya, Hitoshi Endo, Kyohei Inoue, Akira Tsuneki, Atsunori Hasegawa, Hirotoshi Numoto, Shogo Kume, Izumi Yoda, Harumi Horioka, Haider Urebi, Mitsuo Hoshino, Tsuyoshi Tanaka, Toshio Nakamura, Hidekazu Yoshida, Takeshi Saito, Kazuhiro Tsukada, Yusuke Katsurada, Yoshiyuki Aoki, Suguru Oho, Ken-ichi Tanno, Lubna Omar, Chie Akashi, Yasuyoshi Okada, Sumiyo Tsujimura, Naoko Fukami, Ryuichi Yoshitake, Yo Negishi, Panagiotis Tokmakidis, Shouko Ueda, Natsuko Fujikawa, Kiyomi Mori, Saeko Miyashita, Hitoshi Hasegawa, Tomoya Goto, Shu Takahama, Toshio Hayashi, Ryuji Matsubara, Toshiki Yagyu, Masayuki Akahori, Hidemitsu Kuroki, Kenichiro Takao, Teruaki Moriyama, Yoshihiko Nakano and Hidemi Ishida.

In the first season, we carried out surveys of archaeological sites and *bir*s (wells) in the research region, confirming that there is a bias in the dates of the sites on the Euphrates plateau between the towns of Mansura and Ghanem al-Ali. We also confirmed that most of the sites in the western part of the plateau are dated to the Roman, Byzantine and Islamic periods, while in the eastern part only a few sites are distributed, several of which are dated to the Early Bronze Age.

On the basis of these archaeological surveys, we chose Tell Ghanem al-Ali as the candidate for future excavations, and completed its overall plan in the second season. Thus, trench excavations were started at this site in the third season, and they were continued in the fourth, seventh, ninth and tenth seasons.

In the fifth to ninth and eleventh seasons, we carried out surveys at the Early Bronze Age hilltop tombs near the village of Ghanem al-Ali, in order to shed light on the funerary aspect of the EBA settlement of Tell Ghanem al-Ali.

Survey of cairns along the northern edge of the Mount Bishri was started in the second season, and sondage at Rujum Hedaja near Bir Rahub was carried out in the fifth to tenth seasons, with a view to explore the pastoral background of the EBA society in the middle Euphrates river basin.

In the third, fifth and ninth seasons, we carried out intensive surveys of archaeological sites to clarify the EBA land-use patterns around Tell Ghanem al-Ali, in order to gain further records of population history in this region since earlier times. And in the third season, Palaeolithic survey was carried out in the research region.

From the first season onward, our geolo-geographical team joined the field works to obtain information on change of natural environment. They conducted surveys in the research region in the third to sixth, tenth and twelfth seasons.

Botanical research on the specimens obtained from the surveys and excavations was carried out in the third, fourth, sixth, seventh and ninth seasons, and faunal research was carried out in the third and fifth seasons.

As to the human bones unearthed from the sondage, morphological studies were carried out in the seventh and tenth seasons.

In a viewpoint that cultural anthroplogical research is important and indispensable to know the relationship between nomads and agriculturists in the past, our cultural anthropology team researched at the villages of Ghanem al-Ali and Wadi al-Rahum in the seventh and eighth seasons.

Also, we carried out research on the history of the village of Ghanem al-Ali in the fourth and ninth seasons, with ethno-archaeological survey of their modern graves.

The reports presented here are the six working reports of the 8th to 13th field works in the forms of their submission to the Syrian Directorate General of Antiquities and Musems (see Al-Maqdissi, Ohnuma, Al-Khabour, *et al*. (2008, 2009) for the working reports of the 1st to 7th field works).

We like to express our sincerest gatitude to Dr. Bassam Jamous, Director General of the Syrian Directorate General of Antiquities and Musems, who warm-heartedly understands this joint research and is always cooperating with us towards the success of the joint research.

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31/December/2009

ARCHAEOLOGICAL RESEARCH IN THE BISHRI REGION — REPORT OF THE EIGHTH WORKING SEASON —

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April 4, 2009

The 8th working season of the Syria-Japan Archaeological Joint Mission to the Bishri Region was undertaken from February 23th to April 3rd, 2009.

The members of the joint mission from the Syrian and Japanese parties are as follows.

Syrian party: Mohammad Sarhan (Director), Ahmed Sultan, Mohammad Jajan, Ayd Issa.

Japanese party: Mitsuo Hoshino, Tsuyoshi Tanaka, Toshio Nakamura, Takeshi Saito, Yoshiyuki Aoki, Akira Tsuneki, Atsunori Hasegawa, Sumio Fujii, Takuro Adachi, Kae Suzuki, Kazuyoshi Nagaya, Hitoshi Endo, Yoshihiro Nishiaki, Hiroto Nakata, Seiji Kadoaki, Masashi Abe, Shogo Kume, Masayuki Akahori, Hidemitsu Kuroki, and Teruaki Moriyama.

Dr. Bassam Jamous, the Director General of the Syrian Directorate General of Antiquities and Musems, and Dr. Michel Al-Maqdissi, the Syrian Supervising Adviser for this joint mission and the Director of Archaeological Excavations and Research at the Syrian Directorate General of Antiquities and Musems, kindly helped us towards the success of this eighth working season of joint research, and we express our sincerest gratitude to both of them for their heart-warming cooperation.

In this working season, we undertook five kinds of research in the research area (Map 1): 1) geological and geographical field survey, 2) sondage and surface research at Tell al-Ghanem Al-Ali, 3) sondage at Tor Rahum Cairns, 4) survey around Tell al-Ghanem al-Ali, and 5) geohistorical surevey of Tell al-Ghanem Ali and Wadi Rahub.

The following sections are the preliminary results of the research works carried out in this field season.

Map 1 Area including the sites researched by the 8th Syria-Japan Archaeological Joint Mission to the Bishri Region in February to April, 2009.

1. Archaeological Investigation at the Tor Rahum Cairn Field 1 on the Northwestern Flank of Mt. Bishri

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Takuro ADACHI (Research fellow, the Middle Eastern Cultural Center in Japan)
Hitoshi ENDO (Research fellow, Kinki University)
Kazuyoshi NAGAYA (MA student, Waseda University)
Kae SUZUKI (MA student, Kanazawa University)

Introduction

The fifth investigation season at the Bishri cairn fields took place from the 10th of March to the 2nd of April in 2009 with the kind cooperation of the Department of Antiquities and Museums of Syria. The primary goal of this season was to test our previous perspectives in a broader context and, in so doing, provide further insights into the yet-to-be well known Bronze Age pastoral society behind the Middle Euphrates River Basin. For this purpose, we shifted our focus from the Hedaja Cairn Fields, our main concern until the last season (Fujii 2007, 2008; Fujii et al. 2008a, 2008b), to the Tor Rahum Cairn Field 1 and sounded a dozen burial cairns. What follows is a brief summary of the investigation results of this season.

The Site and Site-setting

The site of Tor Rahum Cairn Field 1 (or TRH-1 in our site registration code) is located ca. 8 km southeast of Bir Rahum, a small village along a local road crossing the northwestern flank of Mt.

Bishri (Fig. 1). It is an elongated site ca. 10 km in total length, being extended along the southern edge of the Rahum Plateau (i.e. Tor Rahum) or an escarpment bordering the Homs prefecture. Because of its unique location, the site commands a fine view of the whole range of the northwestern and southwestern flanks of the Bishri mountain system (Fig. 2).

The site consists of some eighty burial cairns and several dozen small features, the former of which are a part of hundreds of cairns aligning along the escarpment. We defined the site as a 10 km long segment by intercepting the endless chain of cairns expediently between two dirt roads descending southward from the plateau.

The site-setting is characterized by an arid climate and consequent poor vegetation. No natural perennial water sources are available around the site and a dozen wells dug along Wadi Rahum barely support the survival of a local community of Bir Rahum, the only sedentary village in this area. Our investigations suggest, however, that a large group of pastoral nomads were based in this area during the Bronze Age probably taking advantage of a short-term climatic amelioration.

The Investigation

Our investigation started with schematic mapping of the elongated site and, then, shifted to a limited sounding of a part of some eighty cairns. We focused on a westerly sub-segment sandwiched between two large-size cairns, BC-117 and BC-131. In addition, three cairns adjacent to these two landmarks were also briefly tested. It follows then that we investigated a total of eighteen cairns. The soundings were conducted by means of a 1–2 m wide trench crossing the center of a mound from the north to the south. All finds were collected following a grid and locus system.

BC-116

This medium-size cairn, ca. 4.5 m in diameter and ca. 0.3 m in relative height, incorporated a roughly round, ca. 2 m across, ground-type cist fringed with undressed limestone cobbles. Nevertheless, the cist produced neither artifacts nor human skeletal remains.

BC-117

This large-scale cairn ca. 1.1 m in relative height consisted of the following three components: an oval ground-type cist ca. 1.4 m by ca. 1.8 m in floor size, an outer wall of the cist ca. 4 m in diameter, and a peripheral wall ca. 7 m in diameter (Fig. 3). A large amount of human skeletal remains were found *in situ* from the cist floor, but no burial gifts accompanied them.

BC-118

This large cairn, ca. 6.5 m in diameter and ca. 0.9 m in relative height, contained an oval ground-type cist ca. 1 m by ca. 2 m in floor area. The cist, encompassed with an ill-delineated outer wall, yielded several flint artifacts and a certain amount of human bones. In addition, a small pit-type tomb dug in later times beside the cist also produced a certain number of human bones including a large skull fragment.

BC-119

This small cairn, ca. 3 m in diameter and ca. 0.1 m in relative height, covered an oval pit-type cist ca. 1–1.5 m in both axes and ca. 0.9 m in floor depth. The cist was sac-shaped in cross-section, being fringed with undressed limestone cobbles around its mouth. Several beads and a dozen flint flakes occurred from fill layers, but no human bones were included.

BC-120

This small cairn measured ca. 3.5 m across and 0.1 m high. It incorporated a round pit-type cist ca. 1 m in diameter and ca. 0.3 m in floor depth roughly in its center, but neither artifacts nor human bones were recovered.

BC-121

An oval pit-type cist ca. 0.7 m by ca. 1 m in floor area and ca. 0.3 m in floor depth was found under a small mound ca. 5 m in diameter ca. 0.2 m in relative height. The cist was not disturbed,

but nothing was found with the only exception of a bronze pin collected by chance around the cairn.

BC-122

This cairn had a diameter of ca. 6 m and a relative height of ca. 0.2 m. Strangely, no cist-like feature was found under the cobble mound. Instead, a large limestone slab was put at the southerly part of the construction surface.

BC-123

This large-scale cairn, ca. 6 m in diameter and ca. 0.7 m in relative height, was heavily disturbed by an illicit digging in the recent past and only the northern half barely remained intact. Two masonry walls were uncovered (Fig. 4). The inner wall was constructed with carefully dressed chalky limestone cobbles, some of which included petroglyphs depicting a quadruped design (Fig. 5). In light of its relatively large diameter (ca. 2.5–3 m), it appears to represent an outer wall of a completely erased cist. The outer wall, on the other hand, was built with larger undressed limestone cobbles and included no petroglyphs. Several beads and a certain number of human bones were found from both disturbed soil and lower fill layers.

BC-124

This cairn consisted of a small mound ca. 3.5 m in diameter and ca. 0.1 m in relative height and a round pit-type cist ca. 1 m in diameter and ca. 0.1 m in floor depth. Nothing was recovered with the only exception of a small flint flake from an upper fill layer of the cist.

BC-125

This stone concentration, ca. 3.5 m across and ca. 0.1 m high, turned out to be a small feature probably attached to the neighboring BC-124. Thus the cairn number was deleted from the list.

BC-126

BC-126 was a small mound with a diameter of ca. 4.5 m and a relative height of ca. 0.3 m, and incorporated a roughly round pit-type cist ca. 1–1.3 m in diameter and 0.6 m in floor depth. The side surface of the cist was carefully covered with a total of nine upright limestone slabs, an unexceptional structure among pit-type cairns at the site (Fig. 6). A small amount of human bones including a complete skull were recovered from the northeastern corner of the cist floor. In addition, some carnelian and snail beads occurred from a middle fill layer.

BC-127

This cairn, ca. 4.5 m in diameter and ca 0.2 m in relative height, incorporated a trapezoidal pit-type cist ca. 1.5 m on a longest side and ca. 0.4 m in floor depth. A certain amount of human bones, probably representing a secondary interment, were found *in situ* beside the northern wall of the cist. In addition, a bronze pin and a few carnelian beads were recovered from lower layers of both the cist and the mound.

BC-128

This non-descript cairn ca. 3 m across and ca. 0.2 m high contained an oval pit-type cist ca. 0.5 m by ca. 1 m in floor area and ca. 0.3 m in floor depth. Neither artifacts nor human bones occurred despite the good state of preservation.

BC-129

This small cairn was similar to BC-122 in that a large limestone slab was put at the southerly position under the mound to replace a cist. Again, nothing was found except for the slab.

BC-130

This cairn was relatively large in size, being ca. 6 m in diameter and ca. 0.5 m in relative height. A coffin-shaped, well-delineated ground-type cist, ca. 1 m by ca. 2.2 m in floor size, was revealed immediately under the mound (Fig. 7). Finds included a bronze pin, several carnelian beads (Fig. 8), and a shell bead. In addition, human bones occurred in large amounts, which included two complete skulls. In light of their disarticulated state, there is no doubt that they represent secondary interments.

BC-131

This large-scale cairn consisted of the following three components: an oval ground-type cist ca. 0.8 m by ca. 1.3 m in floor size and ca. 0.8 m in height, a vaguely-delineated outer wall of the cist, and a peripheral wall constructed with partly dressed limestone boulders (Fig. 9). A cobble mound, ca. 7 m in diameter and ca. 0.9 m in relative height, covered these features. The cist produced some undiagnostic flint artifacts and a certain number of human bones. Of interest is a small pit-type tomb dug beside the northern wall of the cist, which yielded a bronze dagger and sheath from its floor (Fig. 10, 11).

BC-132

Since a triangular point entirely erased core features, nothing can be said about this cairn except that the mound was ca. 5 m in diameter and ca. 0.3 m in relative height.

BC-133

This cairn, ca. 4 m in diameter and ca. 0.5 m in relative height, included an oval ground-type cist ca. 1–1.4 m in floor size. The cist produced two carnelian beads and a certain amount of human bones.

Summary

The archaeological investigation at the Tor Rahum Cairn Field 1 revalidated the techno-typological sequence tentatively established at the Hedaja Cairn Fields. Taking the western half of the 117–131 sub-segment for example, BC-117 can be dated to the Hedaja Phase 1 on the basis of the existence of both the cist outer wall and the peripheral wall. Likewise, BC-118 can be placed to the Hedaja Phase 2 in light of the lack of the peripheral wall. BC-119 and BC-120 is attributable to the Hedaja Phase 3 in view of the disappearance of the two walls and consequent structural simplification. Given these, it follows that the Tor Rahum Cairn Field 1 also falls within the time range from the end of the Early Bronze Age to the beginning of the Middle Bronze Age. (Bearing in mind the fact that large-scale cairns such as BC-117 and -123 are dotted at certain intervals, it seems that the Tor Rahum Cairn Field 1 contained several coeval sub-segments.) Of particular interest is the unique structure of BC-121, which may represent a cairn form subsequent to the Hedaja Phase 3 type.

It is another result of this season that differences in grave goods among contemporary cairn fields were confirmed. While the Hedaja Cairn Fields often produced pottery sherds and snail beads, the Tor Rahum Cairn Field 1 rarely yielded them and, instead, focused on carnelian beads and flint artifacts. The opposite is the case of human skeletal remains. While little bones were found at the Hedaja Cairn, much was recovered from the Tor Rahum Cairn Field 1. It is intriguing to hypothesize that these contrasts are correlated to the identities of subgroups within the large pastoral group concerned. It is needless to say, however, that further evidence is needed to validate this challenging hypothesis.

Another remarkable result is the finding of the bronze dagger and sheath from BC-131. Both of these, though not derived from the main body of the cist, would provide a reliable key to the dating of the Bishri cairn culture. In addition, the occurrence of a large amount of human skeletal remains including three complete skulls would open a way to anthropological studies of the pastoral population who materialized the Bishri Bronze Age cairn entity.

Concluding Remarks

The investigation at the Tor Rahum Cairn Field 1 has enabled us to realize anew the archaeological potential of the Bishri region. Further investigation would hopefully contribute to a better understanding of the yet-to-be well known cultural sphere behind the Bronze Age urban societies along the Middle Euphrates River Basin.

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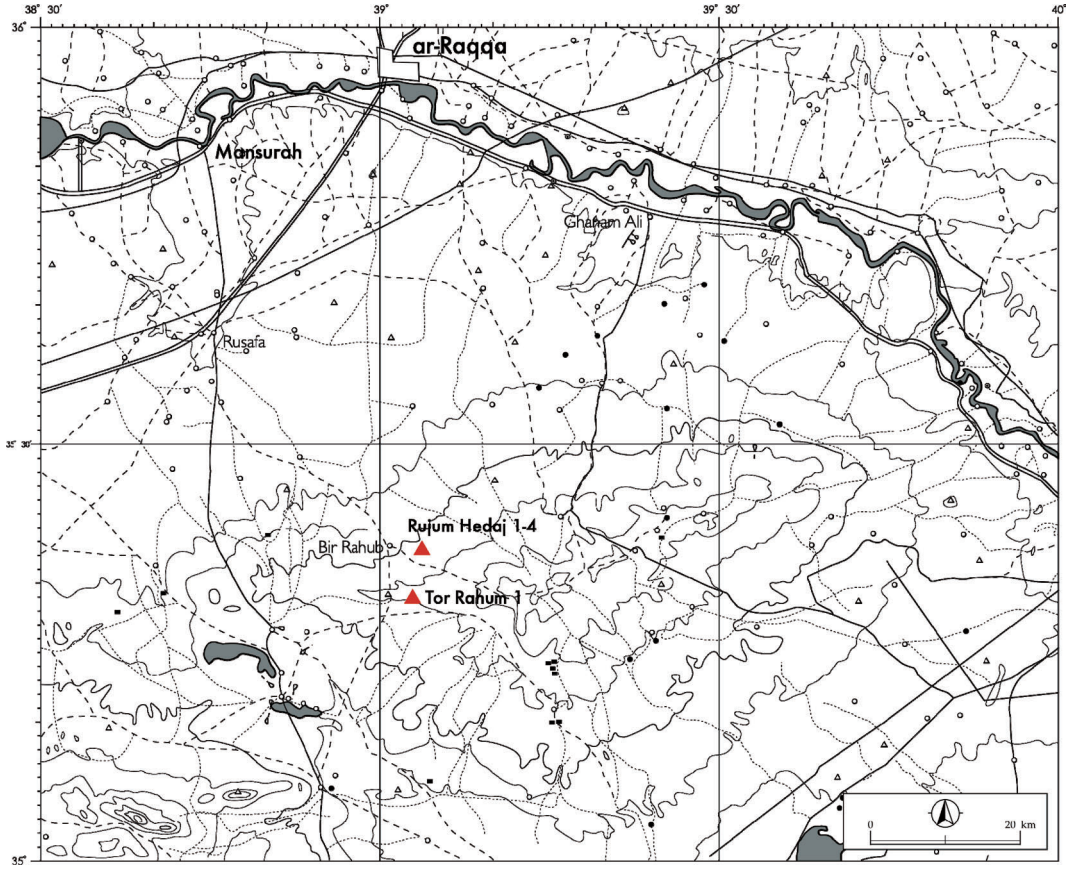

Fig. 1 The location of the Tor Rahum Cairn Field 1.

Fig. 2 A general view of the site (from W).

Fig. 3 A general view of BC-117 (from SW).

Fig. 4 A general view of BC-123 (from W).

Fig. 5 A petroglyph from BC-123.

Fig. 6 A general view of BC-126 (from SE).
Note the skull at the northwestern corner.

Fig. 7 A cist tomb of BC-130 (from NE).

Fig. 8 Various beads from BC-130.

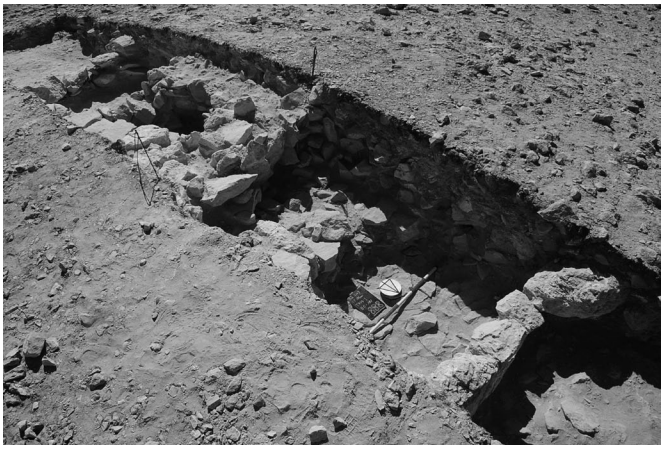

Fig. 9 A general view of BC-131 (from NE).

Fig. 10 A pit-type tomb beside the northern wall of the cist (from NW).

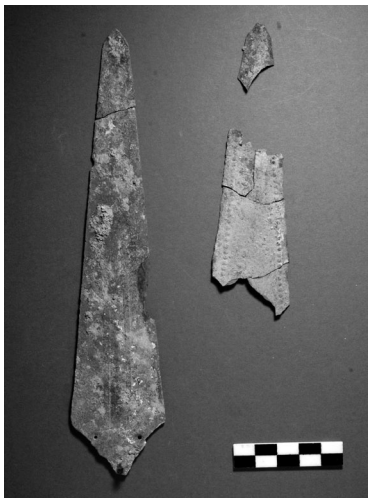

Fig. 11 A bronze dagger and sheath from BC-131.

2. Geo-historical Survey of Ghanem al-Ali and Wadi al-Rahum

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Introduction

In this archaeological research in the Bishri region, the geo-historical research was attempted for the first time in this 8th working season. It tried to clarify the interrelationship between nomads and sedentary people in the pre-modern, modern and contemporary eras to complement the archaeological findings and to see its continuity through the time.

Major method of geo-historical survey is the mixture of folk history and archive works. In this mission, Akahori, expert in folk history, concentrated his efforts in interviews with the people living in the neighborhood of the archaeological sites. Kuroki, specializing in modern history of the 18–19th

history of Aleppo and Raqqa Governorates, took a role of archive and library research using the geographical descriptions on the sites in the modern era, including geographies in Arabic, travel journals, diplomatic and commercial reports written by Europeans in English and French. Moriyama, majoring in the 10–13th century history of the same region covered the similar kind of descriptions in the pre-modern eras mainly written in Arabic.

We conducted general survey of the Raqqa region but paid particular attention to the areas around two archaeological sites; one was the area around the site of Ghanem al-Ali, including the villages of Gharnata (which is widely known as Ghanem al-Ali), Jibli, Sharida, Sabkha, Hameidat (known as Bui Hamad) and more; the other was Bi'r Rahum (or known just as Rahum) in Wadi Rahum and its neighboring communities including Bi'r Zamla, Chulat, Bi'r Sa'id, Bi'r Rashid and more. In addition, archive and library research was conducted in Damascus and Aleppo.

Research schedule

The research around the archaeological sites started on March 16, 2009 and ended on March 24. The schedule was observed as it was planned with a little modification as the following.

March 16: Interview research in Bi'r Rahum by Akahori.
March 17: Interview research in Bi'r Rahum by Akahori and archive research in Damascus by Kuroki.
March 18: Research data assessment by Akahori and archive research in Damascus by Kuroki.
March 19: Interview research in Bi'r Rahum and archive research; collection of documents in Aleppo by Kuroki.
March 20: Interview research in Ghanem al-Ali by Akahori; archive research and collection of documents in Aleppo by Kuroki.
March 21: Interview research in Ghanem al-Ali by Akahori and Kuroki; archive research and collection of documents in Damascus by Moriyama.
March 22: Interview research in Bi'r Rahum by Akahori and Moriyama; archive research and collection of documents in Aleppo by Kuroki.
March 23: Interview research in Bi'r Rahum by Akahori and Moriyama; archive research and collection of documents in Aleppo by Kuroki.
March 24: Interview research in Raqqa by Akahori; archive research and collection of documents in Damascus by Kuroki and Moriyama.
March 25: Archive research and collection of documents in Damascus by Moriyama.
March 26: Archive research and collection of documents in Damascus by Moriyama.
March 27: Archive research and collection of documents in Damascus by Moriyama.
March 28: Archive research and collection of documents in Damascus by Moriyama.

Analysis of collected data and documents will be continued furthermore through 2009. Especially cross check of the names of tribal groups collected in interviews and those recorded in historical documents should be urgent task to be tackled.

Bi'r Rahum

Bi'r Rahum is on the extreme end of the road south from the town of Mansuriyya. Its estimated population is about 300 and almost all of them consider themselves belonging to the lineage of al-Tushush, a part of the Fad'an tribe of the Anaza. Usually the Fad'an is called tribe or qabila and the Anaza is considered as an aggregate of five tribes. The Anaza is one of the largest tribal groups in the eastern part of the Arab world.

They used to be nomads in the old times but now live their sedentary life in the village. Residents of neighboring villages regard them as nomads of Bedouins, they themselves do not accept that

idea. It is a fact that most of them have sheep and goats, but only a small part of dwellers have tents in other areas like Tadmor and make periodical movements between the village and camps. This transhumant way of herding animals still remains in the area.

The village name is constituted by the word "bi'r" or well and "Rahum," which is a personal name. The former term is coming from the fact the village place have many wells. Now they have 15 wells used for their daily life in combination with usage of a midde-sized open-air basin gathering rainwater. Some of the wells were dug after people settled in the village, but many of them have been there since before the foundation of the village and have been traditionally used by nomads. The latter term "Rahum" is the name of a legendary nomad who became an owner of this area and sometimes said to be the very person who dug wells of this village. He is said to have acquired this area in the Ottoman era.

More than 10 extended families can be found, each of which, roughly saying, forming its own compound in the village. Each well also belongs to one of those compounds, but usually usage of other families are not rejected.

The villagers have regular contacts with the nomads in the summer time. In most cases, visiting nomadic people are said to belong to Anaza who come from the Gulf area, but recently those belonging to other groups like Shammar appear to feed their livestock. Village men of Bi'r Rahum say that nomads can use wells of the village as they like, but in some cases they may be charged for usage of wells. It should be confirmed in the survey in the next working season.

No other people in the neighboring villages situated between Bi'r Rahum and Mansuriyya belong to Anaza. Almost all of them identify themselves as Bu Khamis, a part of the Idlim. Idlim is the tribal aggregate whose main body is in southeast Syria and southern Iraq. Both of Anaza and Idlim traces their blood line to Zubayda, who moved from Yemen to Nejd in the historical past, but their ancestry is clearly distinguished among them. In the villages belonging to Bu Khamis, contacts with nomads are said to be very rare nowadays.

In that sense, Bi'r Rahum is an exceptional case in this area, in points of its ancestry and relatively intimate contacts with nomads. It is likely that people of Bi'r Rahum were sedentarized later than those of villages of Bu Khamis. Relatively longer distance between Bi'r Rahum and neighboring Bi'r Zamla in comparison with that of villages of Bu Khamis to one another seems to support this idea.

Roughly saying, Bi'r Rahum is a village in the bordering area where nomads and sedentary people meet each other and exchange. Its dwellers are relatively newly settled ones and therefore socially marginal both for nomads and sedentary people. It makes them possible to bridge smoothly two types of people whose livelihood are based on different conditions.

Ghanem al-Ali

The village of Ghanem al-Ali is much larger than Bi'r Rahum. Its number of residents is estimated some thousands. Most of the residents are descendants of Ghanem al-Ali, from whom the village name is originated. The name Ghanem al-Ali is the name of their ancestor, and that of their village and that of their lineage now, though the formal name of the village is changed to Gharnata recently.

This large village is in fact a complex of four residential areas; three of which is occupied by every three sub-lineages of Ghanem al-Ali, that is, al-Muhammad al-Ali, Maradhikh and Homeydat; the fourth is called Subi'at, where offspring of a brother of Ghanem, Muhammad al-Ali is residing.

The lineage Ghanem al-Ali is a part of the tribe Bu Sha'ban which also traces ancestry to Zubayda just like Anaza and Idlim. Bu Sha'ban occupies the area along the Euphrates between Raqqa and Deir al-Zur. Their residential zone extends along the river but often keeping some distance from it. It is partially because they were sedentarized mainly in the Ottoman era, when the river-side areas of the Euphrates were already occupied by villages of people who had been living as farmers since

old times. In the nearby areas of Ghanem al-Ali, we can see descendants of his brother, Muhammad al-Ali, to form some villages, in one of which, Qusbi, a tomb of Muhammad is located. Unfortunately nobody knows where Ghanem al-Ali is buried.

Degree of sedentarization of people in Ghanem al-Ali exceeds those of Bi'r Rahum and even of Bu Khamis. They identify themselves as traditional farmers, Rifi, while the latter two do not use that term but prefer the term Arab. For instance, in the cemetery of the village of Ghanem al-Ali, tombs of eight saints, Muhammad al-Shuyukh, Ahmad al-Shuyukh, Jasim al-Shuyukh, Mu'jil al-Musa, Muhammad al- Musa, Khalaf al-Musa, Ali al-Faraj and Muhammad al-Faraj, are kept and visited by village women for intercessory invocations. Those saints, salih, are said to have been villagers in the old times where the village of Ghanem al-Ali was still small and located in the area nearer than the place where it is now, and to have been members of the Rifa'iyya, one of the most popular Sufi orders in Syria and the eastern part of the Arab world. That kind of Sufism and saint veneration totally lacks in the case of Bi'r Rahum and villages of Bu Khamis. Though the Sufism is, generally speaking, rarely found among the Bedouins, the fact that even the saint veneration, which is usually popular among them, is totally absent requires additional interpretation. It may indicate that the period of sedentarization of the people of Bi'r Rahum and villages of Bu Khamis is later than that of the people of Ghanem al-Ali.

In addition, we can pay attention to the existence of one exceptional village like Bi'r Rahum in this area. There is a village, Zur Shammar, to the east of Ghanem Ali and that it is considered to be a village of Bedouins. In this case, the term "Bedouins" seems to mean that they belong to the different tribal groups and settled in this area by some reasons later than other people belonging to Bu Sha'ban. That kind of enclaves of ex-nomads would be found in the widely spread agricultural areas along the Euphrates.

The area around the Ghanem al-Ali barely has direct contacts with nomads today. Instead of water wells, villages have plentiful water from the Euphrates and can provide the nomads rich grassland after cultivation, but the nomads today do not seem to reach this area. They have contacts with co-tribesmen in Syria, Iraq and sometimes in Arabian Peninsula, but those contacts cannot be thought as co-existential mode of interrelationship between nomads and sedentary people in the daily life.

Overview

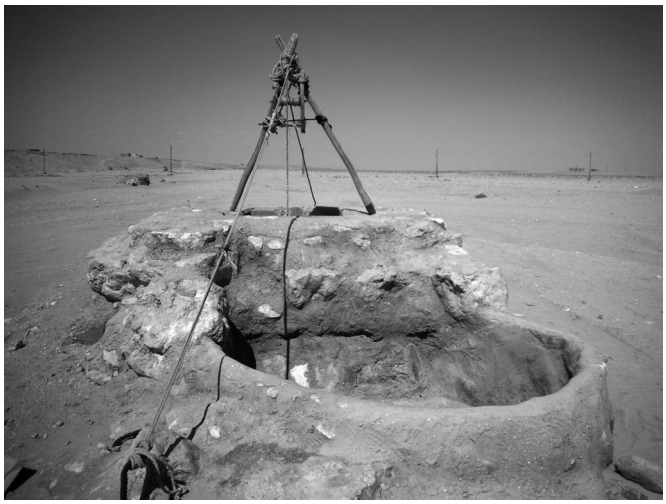
If we believe the villagers' folk knowledge about their history, people living around two archaeological sites, Ghanem al-Ali and Wadi Rahum, were originally nomads and sedentarized in the Ottoman period or later in the first half of the 20th century. In the meantime of sedentarization, they lost identity as nomads and became to consider themselves as merely Arab or even Rifi. In this contxt, people or villages who are sedentarized later than others are called "Bedouins."

Regular contacts with nomadic people are found only in the village of Bi'r Rahum in summer. It seems to mean that such kind of contacts are mainly established in the fringe area of sedentary zones as long as nomads and sedentary people are in co-existential mode. In the Ottoman era and before, contacts may have been seen in the nearer area to the Euphrates, but as the sedentarization was accelerated in the modern times, the place of contacts took distance from the river-side area and now in Wadi Rahum.

If this hypothetical understanding is applicable, the historical development of sedentarization can be said that newly comers always make their place of residence in the peripheral area of agricultural zone along the Euphrates and thus expand the zone to outwards from the river, though sometimes leaving intruded enclaves of ex-nomads as in the case of Zur Shammar.. In the case of this survey, people of Ghanem al-Ali and its neighbors except for those of Zur Shammar were the first comers, then people of Bu Khamis were the second, and people of Bi'r Rahum were the last ones to settle down in the region. Seeing from the sedentary people, we can say that sedentarization is the process

to absorb nomads and assimilate them into sedentary life. In that process, newly settled ex-nomads took a role to mediate the interrelationship between nomads and sedentary people, which is now taken by those of Bi'r Rahum. All of Bu Sha'ban, Bu Khamis and Fad'an were settled in this area in relatively recent times, but they must have had different experiences in the different places in the different times in the modern history of the region.

Still the analysis of collected historical documents is untouched and further detailed research based on interviews would be required in the coming season. However, if we presume that the basic geographical setting, environmental conditions and forms of both of Nomadism and agriculture have been preserved ever since the oldest times, the above mentioned tentative overview of the system of contacts between nomads and sedentary people may be possibly applied to the explanatory works in archaeological studies now underway in this mission.



Picture 1 Water well in Bi'r Rahum.

Picture 2 Dwelling compound in Bi'r Rahum.

الموسم الثامن من أعمال البعثة الأثرية السورية اليابانية المشتركة العاملة في منطقة البشري

بدأت أعمال الموسم الثامن لهذه البعثة الأثرية المشتركة في منطقة البشري بتاريخ23 شباط وانتهت بتاريخ3 نيسان من عام 2009 .

يدير البعثة من الجانب السوري احمد سلطان , فيما يديرها من الجانب الياباني كاتسوهيكو اونوما .

الشكر الجزيل للدكتور بسام جاموس المدير العام للآثار والمتاحف في سورية والدكتور ميشيل مقدسي مدير التنقيب والبحث العلمي في المديرية العامة للآثار والمتاحف والمشرف المستشار لهذا البحث الأثري , لما قدموه من دعم في سبيل إنجاح هذا الموسم .

في موسم العمل هذا تم التركيز على خمسة أنواع من العمل العلمي المطبق في منطقة البحث :

أولاً : <u>استكمال أعمال السبر الاختباري والمسح الأثري لتل غانم العلي :</u>

(اكيرا تسونيكي ,بروفيسور جامعة تسوكوبا0 احمد سلطان , المديرية العامة للآثار والمتاحف 0اتسونوري هاسيكاوا , جامعة تسوكوبا)

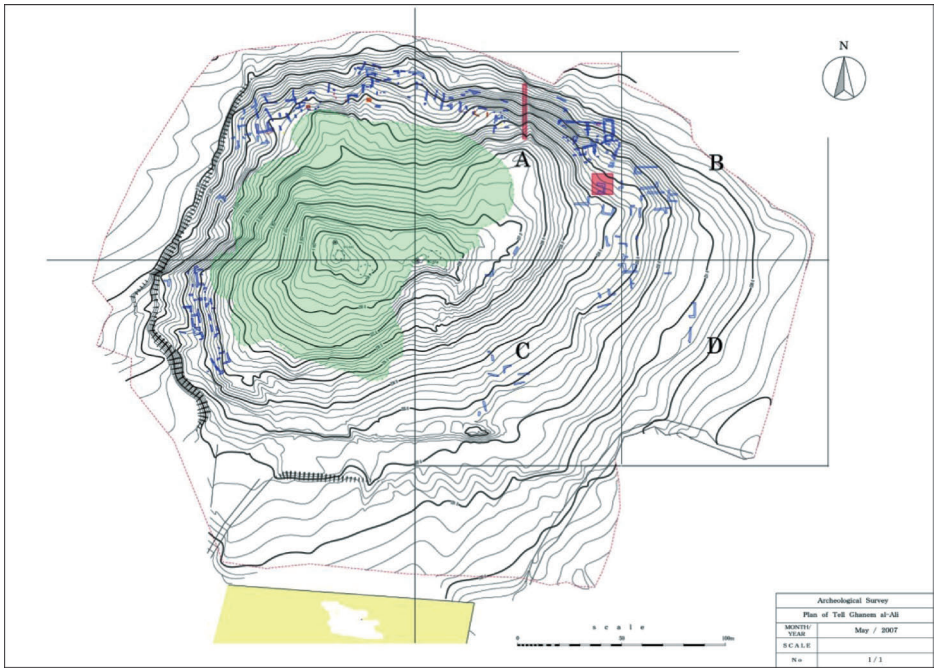
فقد تم تقسيم العمل في موقع تل غانم العلي لهذا الموسم إلى قسمين رئيسيين , هما استكمال أعمال السبر الاختباري في المربع رقم2 من تل غانم العلي, وكذلك إجراء مسح أثري للقسم الشرقي من سطح تل غانم العلي .

حيث هدفت أعمال السبر في المربع2 من التل إلى الوصول إلى تأريخ أوسع لتل غانم العلي ,فخلال موسم العمل هذا تم الوصول إلى التربة العذراء من التل , وقد دلت جميع الطبقات الأثرية التي امتدت على طول هذا المربع أنها تؤرخ إلى عصر البرونز القديم3 و4 (من EBIII إلى EBIV) . وبناءً على ذلك يمكن القول بأن تل غانم العلي قد لعب دوراً هاماً في نشوء المجتمعات السامية الرعوية التي ظهرت خلال الفترة الممتدة من نهاية عصر البرونز القديم وحتى بداية عصر البرونز الحديث 0

فيما هدفت أعمال المسح إلى الكشف والتعرف على عمارة الأبنية الظاهرة على سطح التل , فقد أشارت نتائج هذا الموسم بأن هذه العمارة الظاهرة على سطح تل غانم العلي والتي تعود إلى عصر البرونز القديم غير منتظمة في بنائها 0

مسح أثري لسطح تل غانم العلي : فمنذ بداية المواسم الأولى في تل غانم العلي لوحظ وجود مجموعة من عمارة الأبنية متناثرة على سطح التل والتي من الممكن أن تساعد في دراسة المخطط التنظيمي لهذه المستوطنة خلال عصر البرونز القديم , دون القيام بأعمال تنقيب,حيث تم توزيع القسم الشرقي من سطح التل إلى أربع مناطق متناظرة(A-B-C-D) كما قسمت كل منطقة إلى مجموعة من المربعات بقياس 100×100م . , وبناءً على ذلك فقد تم البدء بأعمال

المسح للقسم الشرقي من هذا التل وذلك من خلال تنظيف السطح الخارجي لهذه العمارة وتصويرها وتوثيقها وتسجيلها وذلك باستخدام نظام التوتل ستيشن 0



خريطة طبوغرافية لموقع تل غانم العلي توضح عمارة الأبنية الظاهرة على سطح التل

حيث ظهرت معالم الأبنية بشكل واسع في جنوب شرقي المنطقةA وجنوب غربي المنطقة B , وقد كانت عمارة هذه الأبنية عبارة عن جدران حجرية باتجاه غرب شمال غرب وشرق جنوب شرق , وبقياس 6×5م 0

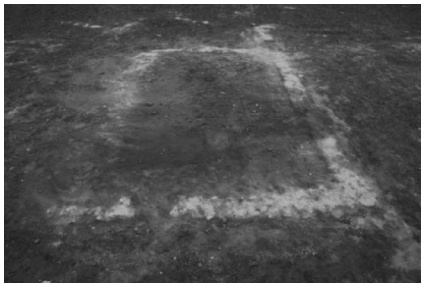
كما لوحظ وجود مجموعة من التنانير منتشرة داخل جدران الأبنية , مما يشير إلى أن هذه الأبنية لم تكن مجرد مطبخ للمنزل وإنما كانت مكان لتحضير الخبز0وقد أشارت مجموعة الكسر الفخارية التي تم جمعها من سطح هذه الأبنية أنها تعود إلى عصر البرونز القديم0

أيضا تم الكشف عن مجموعة من الغرف المستطيلة بقياس 4×6.5م و4×5م حيث اعتبرت امتداد غرف لأبنية ضخمة , وعلى الأغلب أن هذه المنازل تألفت من مجموعة من خمسة غرف وساحة , ويبدو أن هذا النوع من الأبنية كان أحد نماذج السكن الرئيسية في تل غانم العلي خلال عصر البرونز القديم 0

ومع ذلك فقد تم العثور بجانب جدران هذه الأبنية على جرة فخارية صغيرة تؤرخ إلى عصر البرونز الوسيط 0

هناك نموذج آخر من الأبنية الضخمة التي تألفت من مجموعة من الغرف المربعة الموزعة على نسقين , حيث امتدت هذه الأبنية شمال غرب المنطقة C ,إحدى غرف هذه الأبنية كانت بقياس 4×4م , أيضاً تم العثور بداخلها على تنور

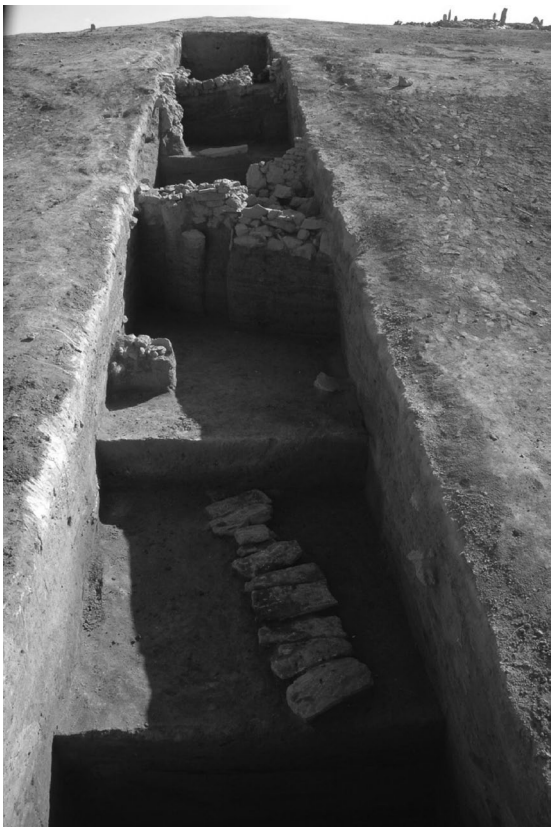
و من الجدير بالذكر بان معظم الكسر الفخارية التي تم جمعها من على سطح التل تنتمي إلى عصر البرونز القديم وبشكل خاص EBIII و EBIV a بالرغم من العثور على عدد محدودجداً من الفخار الذي يعود إلى عصر البرونز الوسيط



جدران الأبنية الظاهرة على سطح تل غانم اعلي

إذاً معظم الجدران الموجودة ضمن هذه المنطقة تشير إلى وجود مجموعة من الغرق المستطيلة الصغيرة , وبناءً على ذلك يمكن القول بأن هذه الأبنية ربما كانت النموذج الرئيسي للمنازل السكنية لأهالي تل غانم العي القدماء 0

استكمال أعمال السبر في المربع 2 : يتوضع هذا المربع عند المنحدر الشمالي من التل بعرض4م (شرق غرب) وبطول 26م (شمال جنوب),



وكان الهدف من إجراء هذا السبر الذي بدأ منذ الموسم الأول عام 2007 هو التوصل إلى تأريخ دقيق لتل غانم العلي 0

وبناءً على ذلك فقد تم تقسيم المربع إلى ست خطوات تميزت من خلالها سبعة سويات من العمارة ,

ففي هذا الموسم استمرت أعمال السبر من أجل الوصول إلى السوية الأقدم في تل غانم العلي , حيث تم الكشف في هذا الموسم عن السوية السابعة والسوية الثامنة بعد ذلك تم الكشف عن التربة العذراء للتل تحت السوية الثامنة مباشرةً ففي السوية السابعة تم الكشف عن ثلاث غرف مفصولة بواسطة جدران والذي تم ذكره في نتائج أعمال الموسم السابق , هذه الجدران كانت مشيدة من قطع من اللبن بقياس 30×60سم حيث بلغ عرض كل جدار من هذه الجدران حوالي 60سم وباتجاه شمال غرب و جنوب شرق. وتبين أن هذه الجدران اللبنية بنيت مباشرة على الأرض في القسم الجنوبي الغربي من الغرفة, إذ لم يُعثر على أساسات حجرية لهذه الجدار, كما تم العثور أيضاً على حفرة صغيرة بلغ قطرها 60سم وعمقها حوالي 50سم 0

أما في السوية الثامنة فقد كانت على بعد40سم أسفل السوية السابعة , كذلك تم الكشف عن ثلاثة غرف فيها , حيث كانت الجدران باتجاه جنوبي شمالي , وهي مشابهة لجدران الأبنية التي تك كشفها في السوية السابعة 0 أيضاً شيدت جدران هذه الأبنية من اللبن بقياس مشابه لقطع اللبن المستخدم في السوية7 ,حيث كانت عمليه بناء الجدران في هذه السوية أكثر ترتيباً من السوية السابعة , كذلك كان هذا الجدار بعرض 30سم 0

وبعد توثيق وتسجيل هذه الجدران في السوية الثامنة تمت إزالتها حيث تم الحفر بعمق اسفل هذه السوية , حيث تم الكشف عن طبقة سميكة من الرماد التي احتوت أيضاً على الفحم على عمق 40سم أسفل السوية الثامنة , إذ لم يتم العثور على أية عمارة , استمر الحفر بعمق أيضاً حيث لوحظ وجود بعض الكسر الفخارية بالإضافة إلى قليل من الفحم دون وجود أية عمارة , استمر الحفر بعمق أكثر حتى الوصول إلى التربة العذراء لهذا التل 0وعلى ذلك يمكن القول بأن تل غانم العلي لا يحتوي على سويات عمارة قبل عصر البرونز القديم ,

وكنتيجة لأعمال السبر التي جرت في المربع2 , يمكن القول أن تل غانم العلي يحتوي على سويات أثرية تمتد من منتصف الألف الثالث وحتى بدايات الألف الثاني قبل الميلاد , حيث ازدهرت هذه المستوطنة خلال عصر البرونز القديم3و4 , وعلى ذلك فإننا نلاحظ بأن تل غانم العلي يُعتبر من أهم المستوطنات على حوض الفرات الأوسط والتي تلعب دوراً هاماً في دراسة نشوء القبائل البدوية الرعوية في المنطقة 0

ثانياً : <u>مسح أثري للمنطقة المجاورة لتل غانم العلي :</u>

(يوشيهيرو نيشياكي:بروفيسور,جامعة طوكيو0 ماساشي آبي ,طالب0سيجيه كاداواكي ,طالب 0شوغو كومي,طالب0هيروتو ناكاتا , دكتور)

فقد امتدت منطقة البحث لهذا الموسم على مساحة 10 كم تقريباً حيث غطت أعمال المسح الأراضي المجاورة لتل غانم العلي والممتدة بين المنطقة المنخفضة من نهر الفرات المغطاة بالحقول الزراعية الخضراء وبين الهضبة الجنوبية لنهر الفرات التي قطعت بمجموعة من الأودية التي كانت روافد نهر الفرات منذ القِدم , ويعتبر وادي الخرار أحد أكبر هذه الأودية

والذي يبعد حوالي 2كم جنوب نهر الفرات في المنطقة الممتدة بين تل غانم العلي في الشرق وتل حمادين في الغرب حيث تم مسح هذا الوادي من كل جهاته 0

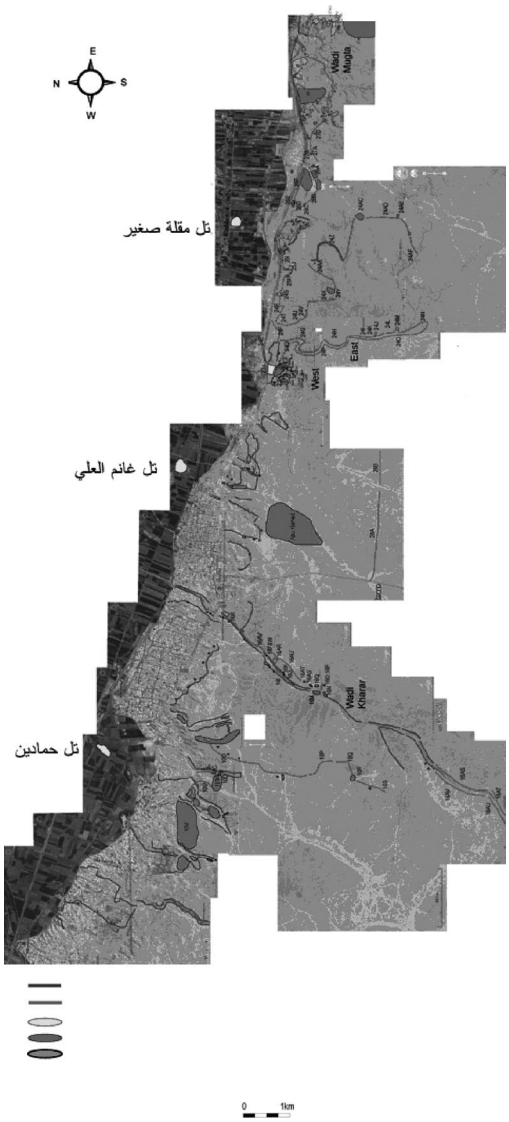
كما تم تحديد أربع مناطق من أجل إجراء المسوحات فيها , حيث شملت الأولى المنطقة الممتدة شرق وادي جزلة وشملت الثانية الامتداد الجنوبي لوادي الخرار أما الثالثة فشملت تل مقلة صغير الذي يمتد على الضفة اليمنى لنهر الفرات إلى الشرق من تل غانم العلي فالمسوحات السابقة لهذه المنطقة أرخت هذا التل إلى عصر البرونز القديم ومن الممكن أنه يتزامن مع تل غانم العلي , وأخيرا المنطقة الرابعة والتي امتدت حوالي 5-6كم جنوب الهضبة الجنوبية لنهر الفرات 0

حيث بدأت أعمال المسح لهذا الموسم من خلال السير على الأقدام ضمن هذه المناطق , إذ يتم جمع والتقاط معظم الدلائل الأثرية المنتشرة على سطح الأرض , ومن ثم يتم دراستها وتوثيقها من أجل تأريخها وبناء على ذلك يتم الحصول على تأريخ دقيق للمواقع الأثرية المنتشرة ضمن منطقة المسح 0

وبأتباع هذا المنهج من البحث تم تحديد حوالي 85 موقع أثري , امتدت على طول الحافة الشمالية لجبل البشري المقابلة لتل غانم العلي باتجاه شرق غرب , معظم هذه المواقع كانت عبارة عن مدافن تُؤرخ إلى عصر البرونز القديم , كما عُثر على مجموعة من الأدوات الحجرية التي امتد تاريخها من عصر الباليوليت الأوسط إلى عصر البرونز 0

تل مقلة صغير : الذي يقع على الضفة اليمنى لنهر الفرات حوالي 5كم إلى الشرق من موقع تل غانم العلي , حيث تبلغ مقاسات هذا التل 110×120م باتجاه شمال جنوب وشرق غرب , ويبلغ ارتفاعه6م , يغطي سطح هذا التل مجموعة من المقابر الحديثة ,انتشرت بشكل كبير , تم جمع كمية كبيرة من الكسر الفخارية التي أكدت أن هذا التل كان مأهولاً خلال عصر البرونز القديم كما دلت مجموعة الأدوات الحجرية (رؤوس السهام) المنتشرة بجانب الموقع إلى وجود موقع يعود إلى عصر النيوليت بالقرب من تل مقلة صغير (فوق الهضبة الجنوبية المجاورة للتل) وكما لوحظ انتشار مجموعة من الأحجار الكلسية التي تبدو أجزاء من أساس بناء حجري 0

ومن الواضح أن تل مقلة صغير قد لعب دوراً هاما في المنطقة خلال عصر البرونز القديم كما تل غانم العلي وتل حمادين , حيث امتدت هذه المواقع الثلاث على طول 5-6كم بجوار مجرى النهر0 وبناءً على ذلك فإنه من الممكن ان تكون هذه المواقع الثلاث كانت مأهولة بالسكان خلال عصر البرونز القديم 0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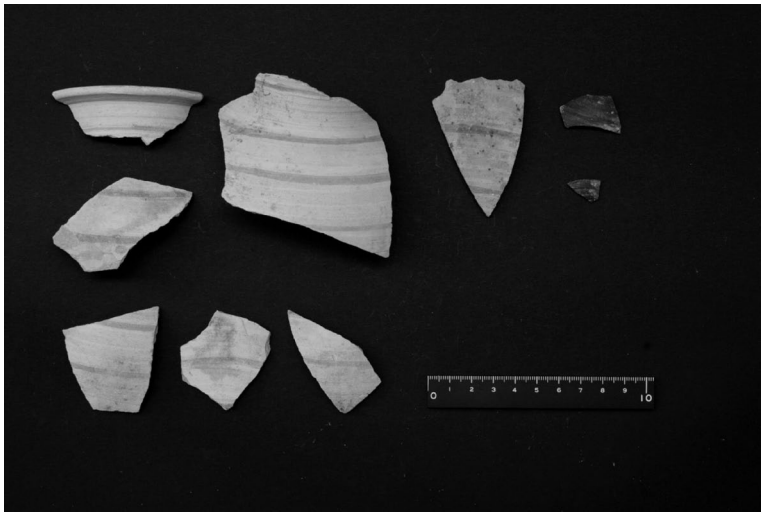


مجموعة من الكسر الفخارية من منتجات الفرات وجدت بجانب المدافن الحلقية(Tumuli) المنتشرة على الحافة الشمالية لجبل البشري

صورة من جهة الشمال لموقع تل مقلة صغير مغطى بالمقابر الإسلامية الحديثة

ثالثاً : مسح جيولوجي وجغرافي ضمن منطقة البحث :

(ميتسو هوشينو , جامعة ناغويا 0 تسويوشي تاناكا , جامعة ناغويا 0 تسوشي ناكامورا, جامعة ناغويا 0 تاكاشي ساييتو , جامعة ميجو 0 يوشييوكي اوكي , جامعة ناغويا)

فقد تم التركيز في هذا الموسم جمع العينات الترابية من المربع2 في تل غانم العلي بالإضافة إلى عينات أخرى من وادي الخرار وكذلك عينات تم جمعها من طبقة الإسفلت الموجودة في عمق جبل البشري بهدف تحليلها بواسطة استخدام الكربون14 من اجل الحصول على تأريخ دقيق لهذه العينات 0

حيث تم جمع أكثر من ثلاثين عينة تألفت من مواد متفحمة بالإضافة إلى تربة محروقة من المربع2 في تل غانم العلي امتدت من الطبقات العليا وحتى أعمق نقطة من هذا المربع 0

كما تم دراسة طبوغرافية المنطقة الممتدة حول المواقع العائدة إلى عصر الباليوليت في وادي الخرار ودراسة الطبقات الجيولوجية فيه 0 حيث أنه من الضروري فحص ودراسة المواقع العائدة إلى عصر الباليوليت وذلك من أجل تكوين فكرة عن إعادة تشكيل التاريخ وملاحظة التغيرات البيئية لهذه المنطقة 0 جميع الأدوات الصوانية التي تم جمعها في هذه المنطقة تؤرخ

إلى عصر الباليوليت الأدنى وحتى النصف الأول من عصر الإبيباليوليت (حوالي 20.000سنة قبل الحاضر) 0

وقد أظهرت الدراسة التي تمت ضمن مقطع جيولوجي متوضع جنوبي تل غانم العي ضمن منطقة المصنع المحاذي للتل وجود طبقتين جيولوجيتين , حيث تألفت الطبقة العُليا من ترسبات حديثة , فيما تشكلت الطبقة الأدنى من المقطع من ترسبات قديمة ,وقد عُثر على أداة صوانية ضمن هذه الطبقة , وقد تم جمع تسعة عينات ترابية من هذا المقطع من أجل تحليلها 0

صورة تُظهر الترسبات الكلسية في المنطقة بالإضافة إلى الترسبات الرملية

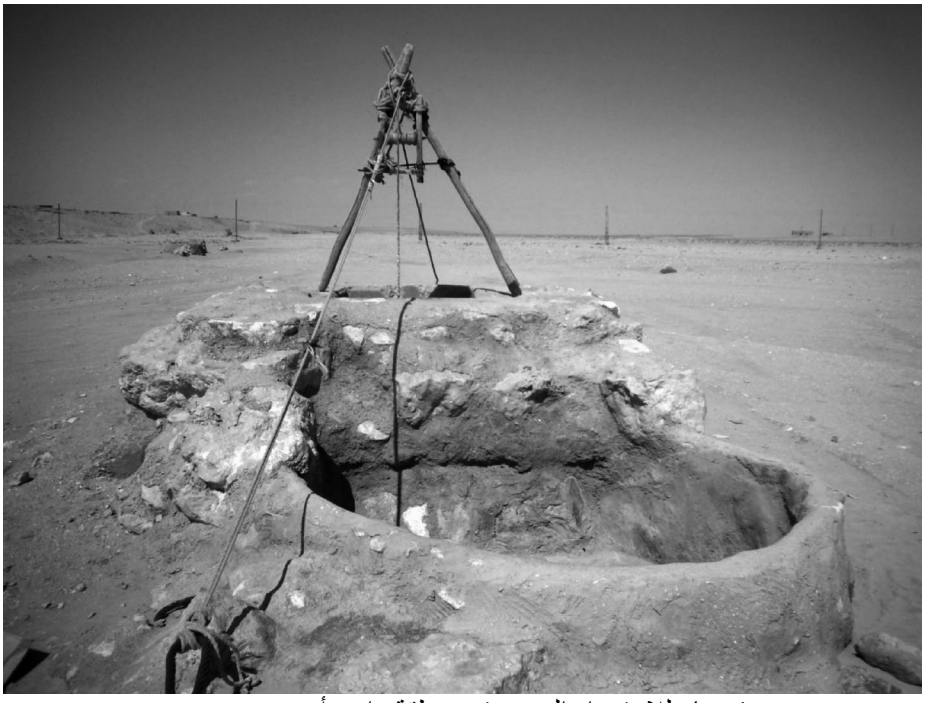
دراسة جيولوجية للمقطع الموجود ضمن المصنع المجاور لتل غانم العلي

كذلك تم جمع عينات إسفلتية من منطقتين ضمن منطقة البحث ,المنطقة الأولى كانت من منجم الإسفلت الموجود ضمن جبل البشري الذي يمتد بعيدا عن نهر الفرات باتجاه الجنوب , فقد تم دراسة هذا المنجم الذي تبين أنه يتألف من ثلاث طبقات إسفلتية , الطبقة العُليا والتي كانت بسماكة 1م تقريباً , أما الطبقة الوسطى فكانت بسماكة 3م ,فيما كانت الطبقة الأخيرة سميكة جداً حيث لم يتم التوصل إلى نهاية هذه الطبقة , وقد غطى هذه الطبقات الثلاث الحجر الرملي 0

عينات إسفلتية أخرى كان قد تم جمعها من منطقة زور شمر والتي تبعد حوالي 5كم إلى الغرب من موقع تل غانم العلي حيث بلغت سماكة الترسبات الإسفلتية في هذه المنطقة حوالي 50سم وتتم دراسة هذه العينات وتحليلها في مخابر جامعة ناغويا في اليابان 0

رابعاً : دراسة إثنوغرافية لمنطقة غانم العلي ومنطقة وادي رحوم :

تقع منطقة وادي رحوم عند نهاية الطريق الإسفلتي جنوب بلدة المنصورة , في منطقة يبلغ عدد سكانها حوالي 300 نسمة . معظم هؤلاء السكان ينتمون إلى عائلة الطشوش , وهي جزء من عشيرة الفدعان التي تنتمي بدورها إلى قبيلة عنزة التي تُعتبر واحدة من خمسة عشائر بدوية منتشرة في القسم الشرقي من الوطن العربي 0 وقد اعتمدت هذه القبيلة على حياة التنقل منذ القديم , وعلى ذلك فقد اعتمد أهالي هذه القرية حياة الترحل في القرية , ويعتمدون هؤلاء الأشخاص في حياتهم على الرعي فلديهم قطعان من الماعز والأغنام , البعض من هؤلاء (البدو) يعيشون في الخيم ويعتمدون التنقل والترحال بين خيمهم والقرى المجاورة



بئر ماء للاستخدام اليومي في منطقة وادي أو بير رحوم

وقد سُميت القرية أو المنطقة بهذا الاسم نسبة إلى شخص يدعى رحوم قد جاء إلى المنطقة وقام بحفر مجموعة من الآبار فيها , هذه الآبار التي تُعتبر حاجة يومية لأهلي المنطقة

أيضاً هناك علاقة اتصال بين هؤلاء الناس الرعويين وأهالي القرى المجاورة وذلك خلال فصل الصيف 0 إذاً يمكن القول بأن بئر رحوم هي قرية تقع في منطقة حدودية تشمل تجمعات سكانية رعوية متنقلة بالإضافة إلى تجمعات مستقرة بالمنطقة 0

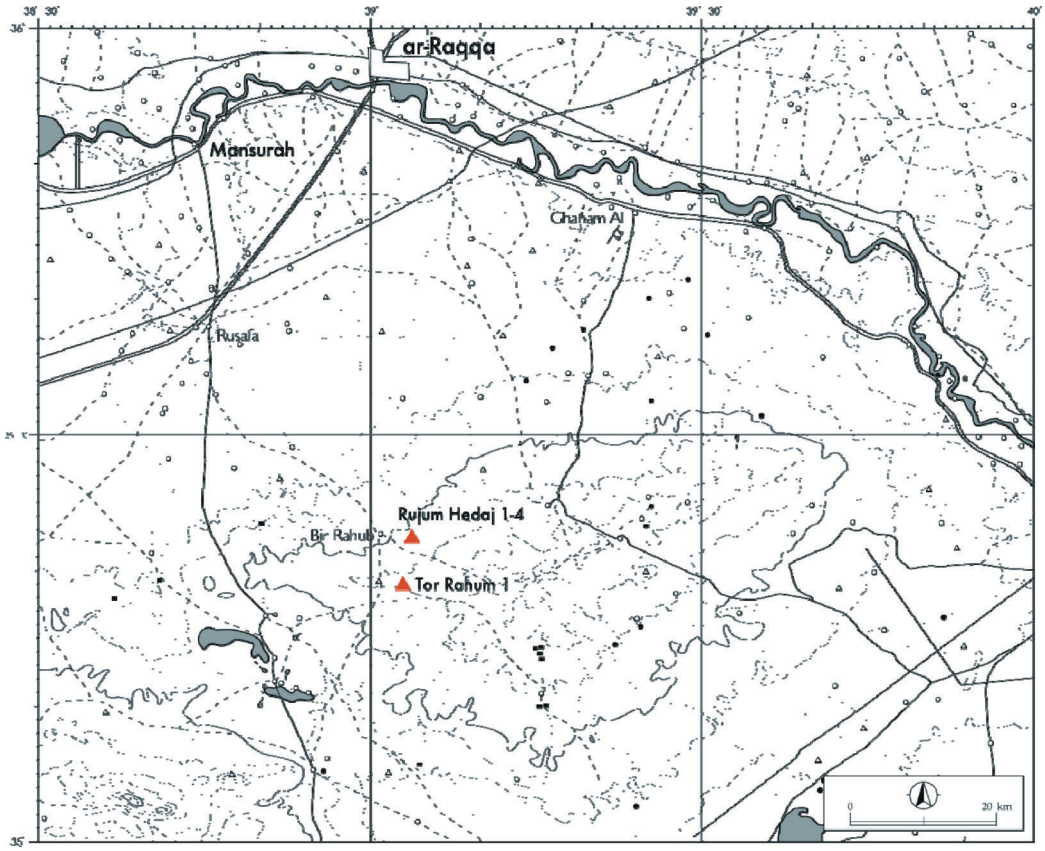
أما منطقة غانم العلي فهي اكبر من منطقة بير رحوم أو وادي رحوم حيث يبلغ عدد السكان فيها أكثر من 3000 نسمة حيث تبين أن هذه التسمية تعود لاسم شخص قديم عاش في المنطقة وسميت القرية باسمه أما التسمية الحديثة لهذه القرية فهي غرناطة 0

ينتسب أهالي هذه القرية في منشأهم إلى أربعة أسماء تنسب لأشخاص ,ثلاثة منهم يرجعون بنسبهم إلى غانم العلي وهم المحمد المردوف والحميدات , أما الرابع فيسمى السبيعات وهي تسمية لشخص هو شقيق غانم العلي0

خامساً : مسح أثري للمدافن الحلقية(Tumuli) في منطقة طول رحوم

سوميو فوجي بروفيسور جامعة كانازاوا 0 تاكورو اداتشيس مركز دراسات الشرق الاوسط طوكيو 0 هيتوشي إندو جامعة كينكي 0 كازايوشي ناغايا جامعة واسيدة 0 كي سوزوكي جامعة كانازاوا)

تهدف أعمال هذا الفريق إلى تتبع آثار المجتمعات الرعوية المتنقلة في عصر البرونز الوسيط والتي تنقلت ضمن منطقة البشري (إلى الجنوب من حوض الفرات الأوسط) 0



خريطة جغرافية توضح منطقة البحث والدراسة لهذا الموسم

حيث تركزت أبحاث المواسم السابقة على دراسة المدافن الحلقية العائدة للمجتمعات المتنقلة الموجودة ضمن منطقة حداجة 0 أما في هذا الموسم فقد تحولت منطقة البحث إلى دراسة المدافن الحلقية الموجودة ضمن منطقة طول رحوم ,التي تقع عند الحدود الإدارية لمدينة حمص حوالي8كم عن منطقة بير رحوم , حيث تتميز هذه المنطقة بمناخ جاف وتضم هذه المنطقة مجموعة من حوالي 80 مدفناً حلقياً 0

فقد تم التركيز على إجراء السبر لمدافن القسم الغربي من المنطقة والتي احتوت على مدافن حلقية ذات قياسات كبيرة (كالمدفن BC-117 والمدفن BC-131) بالإضافة إلى ثلاثة مدافن أخرى مجاورة للمدفنين المذكورين ومن ثم تمت دراسة حوالي 18 مدفن حلقي 0 حيث تم فتح اسبار لهذه المدافن بعرض تراوح بين 1-2م باتجاه شمالي جنوبي 0

المدفن BC-116 : وهو مدفن ذو حجم صغير حيث بلغ قطره 4.5م وارتفاعه 30سم هو ذو شكل مستدير تقريباً ,مغطى بالبلاط الكلسي وقد وجد فيه بعض البقايا العظمية الإنسانية0

المدفن BC-117 : وهو مدفن ذو حجم كبير ويبلغ ارتفاعه 110سم , محاط بسور حجري يبلغ قطره حوالي 4م وسور خارجي يبلغ قطره 7م ,وجد بداخله عدد كبير من العظام الإنسانية 0

المدفن BC-118 : مدفن كبير أيضا يبلغ قطره حوالي 6.5م وارتفاعه 90سم , ذو شكل بيضوي ويتألف في تركيبه من ثلاثة عناصر وهو محاط بسور حجري ضخم عُثر بداخله على بعض الأدوات الصوانية بالإضافة إلى كمية من العظام الإنسانية 0

المدفن BC-119 : مدفن صغير بقطر 3م وارتفاع10سم , وجد بداخله مجموعة من الخرز وبعض الأدوات الحجرية دون وجود عظام حيوانية بداخله 0

المدفن BC-120 : مدفن صغير قطره 3.5م وارتفاعه 10سم , لا وجود لاي عظام حيوانية بداخله 0

المدفن BC-121 : وهو ذو شكل بيضوي بقطر5م وارتفاع 20سم , وجد هذا المدفن تحت هضبة صغيرة , وجد فيه مسمار برونزي 0

المدفن BC-122 : يبلغ قطر هذا المدفن 6م وارتفاعه 20سم 0

المدفن BC-123 : مدفن كبير يبلغ قطره 6م وارتفاعه70سم , تم الكشف عن أثنين من الأسوار الحجرية المحيطة بهذا المدفن , تم الكشف عن مجموعة من الخرز بالإضافة إلى العظام الحيوانية 0

المدفن BC-124 : يتألف هذا المدفن من هضبة صغيرة بقطر 3.5م وارتفاع10سم ,يأخذ شكل شبه دائري 0

المدفن BC-125 : وهو مدفن صغير يبلغ عرضه 3.5 م وارتفاعه 10سم وهو مشابه في هيكلته للمدفن السابق **0**

المدفن BC-126 : يبلغ قطره 4.5 وارتفاعه30سم , فقد تغطى سطح هذا المدفن بتسعة ألواح من الحجر الكلسي , وجد بداخل هذا المدفن مجموعة من العظام الإنسانية مع جمجمة بحالة جيدة 0

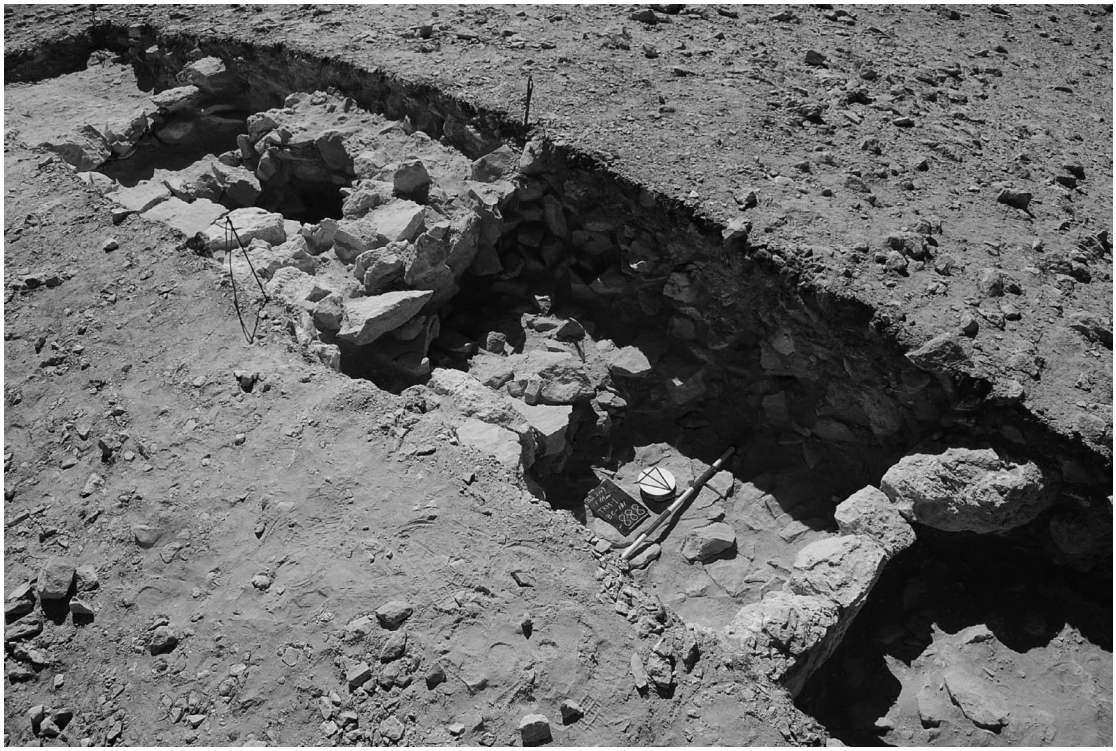
المدفن BC-127 : يبلغ قطر هذا المدفن 4.5م وارتفاعه 20سم ,عثر بداخله على بعض العظام الإنسانية ومسمار من البرونز بالإضافة إلى بعض الخرز 0

المدفن BC-128 : مدفن صغير يبلغ ارتفاعه 20سم يغطي سطحه مجموعة من الحجارة الكلسية 0

المدفن BC-129 : مدفن صغير مشابه في تركيبه للمدفن BC-122 ,يتألف من كتل كبيرة من الحجر الكلسي , لم يوجد بداخله عظم إنساني 0

المدفن BC-130 : يبلغ قطر هذا المدفن حوالي 6م , وارتفاعه 50سم , وجد بداخله مجموعة من الخرز , كما وجد أيضا مسمار برونزي بالإضافة إلى كمية كبيرة من العظام الإنسانية 0

المدفن BC-131 : وهو مدفن كبير الحجم شكله بيضوي , يتألف من ثلاث عناصر حجرة الدفن بالإضافة إلى سورين من الحجارة داخلي وخارجي ,قطره 7م وارتفاعه 90سم , عثر فيه خنجر صغير وغمد من البرونز بالإضافة إلى العظام الإنسانية 0



صورة توضح أعمال السبر في المدفن الحلقي(Tumulus) رقم BC-131

المدفن BC-132 : مدفن صغير نسبياً , فقد بلغ قطره 5م وارتفاعه 30سم 0

المدفن BC-133 : يبلغ قطره 4م وارتفاعه 50سم , وجد فيه قطعتين من الخرز الأحمر بالإضافة إلى كمية من العظام الإنسانية 0

خلاصة : إن جميع الأبحاث والدراسات الأثرية التي نُفذت في منطقة طول رحوم قد أثبتت أن المدافن الحلقية الموجودة في هذه المنطقة هي مشابهة للمدافن الحلقية المنتشرة في منطقة حداجة فعلى سبيل المثال المدفن BC-117 يؤرخ إلى نفس الفترة الزمنية التي تنتمي إليها مدافن حداجة1 , أيضا المدفن BC-118 مشابه لمدافن حداجة2 , والدافن BC-119 .BC-120 تؤرخ إلى نفس الفترة الزمنية لمدافن حداجة3 0

يمكن أن نستنتج أن المدافن الحلقية في منطقة طول رحوم تؤرخ إلى الفترة الممتدة من نهاية عصر البرونز القديم وحتى بدايات عصر البرونز الوسيط 0

وكنتيجة أخرى لأعمال هذا الموسم نلاحظ وجود اختلاف في مرفقات الدفن في هذه المنطقة مع مرفقات الدفن التي وجدت في حداجة التي قدمت المدافن فيها العديد من الكسر الفخارية وفي

طول رحوم تم العثور على كمية كبيرة من العظام الإنسانية بينما كانت كمية العظام الإنسانية في مدافن حداجة قليلة جداً 0

كذلك نلاحظ أن مكتشفات البرونز من خنجر صغر وغمد التي عثر عليها من المدفن BC-131 لم يُعثر عليها في داخل حجرة الدفن الرئيسية , وهنا عامل آخر يساهم في التوصل إلى تأريخ طبيعة هذه المدافن الحلقية المنتشرة ضمن منطقة البشري ,بالإضافة إلى وجود ثلاث جماجم بشرية بحالة جيدة مما يفتح الطريق أمام الدراسات والأبحاث الإنثروبولوجية في التعرف بشكل أوسع على هذه المجموعات المتنقلة التي شكلت هذه المدافن الحلقية خلال عصر البرونز 0

مجموعة متنوعة من الخرز الذي عُثر عليه في المدفن BC-130

ARCHAEOLOGICAL RESEARCH IN THE BISHRI REGION — REPORT OF THE NINTH WORKING SEASON —

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June 12, 2009

The 9th season's Syria-Japan Archaeological Joint Mission to the Bishri Region started on April 28 and ended on June 12, 2009.

Dr. Bassam Jamous, the Director General of the Syrian Directorate General of Antiquities and Musems, and Dr. Michel Al-Maqdissi, the Syrian Supervising Adviser for this joint mission and the Director of Archaeological Excavations and Research at the Syrian Directorate General of Antiquities and Musems, kindly helped us towards the realization of this ninth working season, and we would like to express our sincerest gratitude to both of them for their heart-warming cooperation.

The members of the joint mission for the 9th working season are as follows.

Syrian party: Mohamad Sarhan (Director), Ahmed Sultan, Mohamad Jajan, Aed Issa and Ibrahim Khalil.

Japanese party: Katsuhiko Ohnuma (Director), Hirotoshi Numoto, Shogo Kume, Yoshihiro Nishiaki, Masashi Abe, Akira Tsuneki, Atsunori Hasegawa, Chie Akashi, Kenichi Tanno, Sumio Fujii, Kae Suzuki and Kyohei Inoue.

In this working season, we undertook series of research of which outlines are described below.

1. Archaeological Survey around Tell Ghanem Al-'Ali (III)

Yoshihiro NISHIAKI (Professor, the University Museum, the University of Tokyo) and
Masashi ABE (Visiting Researcher, National Research Institute
for Cultural Properties, Tokyo)

Our archaeological survey has been currently conducted in the vicinity of the Bronze Age site of Tell Ghanem al-'Ali. As the site is situated on the right bank of the Euphrates, the survey area forms a semi-circular area with a radius of 10 km, encompassing two distinct geo-environmental units, or the Euphrates lowlands and the steppic Bishri plateau. The major objectives of the survey include: (1) to document the historical background of the Bronze Age communities in this region by means of uncovering a wide range of archaeological sites since the Paleolithic period, and (2) to examine land-use patterns during the Bronze Age. Indeed, the previous two seasons of our survey (March to April of 2008, and February to March of 2009) successfully located over a hundred of Palaeolithic to the Bronze Age sites in both the lowlands and the plateau, which have provided valuable information

directly relevant to these goals. In order to further develop our archaeological database we conducted an additional survey in May of 2009 with the same survey method as outlined in the previous report (al-Maqdissi a both nd Ohnuma 2009).

First, we surveyed the valley of Wadi Jazla West (Area 23), situated approximately 2 km from Tell Ghanem al-'Ali. The previous seasons' investigation revealed a Bronze Age sedentary settlement as well as its cemetery in the lower stream of this wadi. Its further upstream was surveyed in this season (Fig. 1), which enabled us to define the southern extension of the cemetery. Numerous, heavily plundered shaft tombs were located. One of such tombs contained three complete pottery vessels (Fig. 2), derived from Middle Bronze Age. The survey along this wadi also produced a series of Bronze Age flint scatters, reflecting intensive exploitation of this area in this period. In addition, a short-term Neolithic station was also identified. It was located a confluence of two small tributaries of the wadi. The recovered artifacts, consisting of broken arrowheads and knives only, suggest a hunter's stop for the function of this site.

Second, the valley of Wadi Beilune, located nearly at the eastern limit of the survey area, was also investigated. When we visited this wadi in the last season, we discovered a very impressive Bronze Age cairn field, consisting of more than one hundred cairns built with gypsum rocks and stone chambers (Figs. 3 and 4). The left bank of this wadi (Area 26), which had been less fully explored, was surveyed in this season again. A western limit of the cairn filed was thus defined, along with the recovery of Bronze Age and earlier flint scatters that probably related to the short term activities (Fig. 5). Situated close to the northern fringe of the steppe plateau facing the lowlands, this grave complex stands out in our survey area in terms of the tomb type that is more comparable to that known in the Bishri mountains itself. Also unique to this complex is that it does not have a permanent settlement nearby, while all the large graveyards we have discovered so far are situated close to sedentary settlements (Tell Ghanem al-'Ali, Tell Hamadin, and Jazla). These would highlight the significance of this cairn field for exploring the relationships between the lowlands and the steppe communities in the Bronze Age.

Third, we made a survey to identify local lithic raw material sources for the tell-based Bronze Age community. The excavations of Tell Ghanem al-'Ali as well as our previous surveys indicate that the Bronze Age flint knappers made stone tools using water-rolled cobbles and pebbles. Appropriate flint pebbles and cobbles for tool production are hardly visible in the lowlands today due to the thick alluvial deposits. Accordingly, we investigated Quaternary fluvial deposits of the ancient Euphrates. As a matter of fact, we readily encountered rich gravel layers in a terrace extending from Tell Ghanem al-'Ali to the west along the southern edge of the lowlands (Fig. 6). They contained pebbles and cobbles with a diameter of 10 to 20 cm, which are quite comparable to those used in the Bronze Age (Fig. 7). The nearest edge of the terrace is just a few hundred meters south from Tell Ghanem al-'Ali. The terrace is generally known as Qf II, on which the modern villages of Tell Ghanem al-'Ali and Tell Hamadin are situated. It is also known as containing rich Lower and Middle Palaeolithic artifacts. This local flint source would have been more frequently used than the massive fluvial deposits of Qf III, developed on the edge of the plateau from the area of Wadi Beilune to the east. We actually discovered Bronze Age cores and flakes at some of the gravel cuttings of this terrace (Fig. 8; Area 10). In addition, the excavated flint assemblages from Tell Ghanem al-'Ali have yielded a small number of reused Lower and Middle Palaeolithic cores, which were most likely to have been brought in from the gravel layers to the settlement as raw materials.

Fig. 1 Surveying the left bank of Wadi Jazla West.

Fig. 2 Middle Bronze Age pottery collected at one of the plundered shaft tombs at Wadi Jazla West.

Fig. 3 Distant view of the large Bronze Age cairn field near Wadi Beilune.

Fig. 4 A Bronze Age cairn near Wadi Beilune.

Fig. 5 Bronze Age and earlier flint scatters along Wadi Beilune.

Fig. 6 A modern cutting of the Quaternary fluvial deposits near Tell Hamadin.

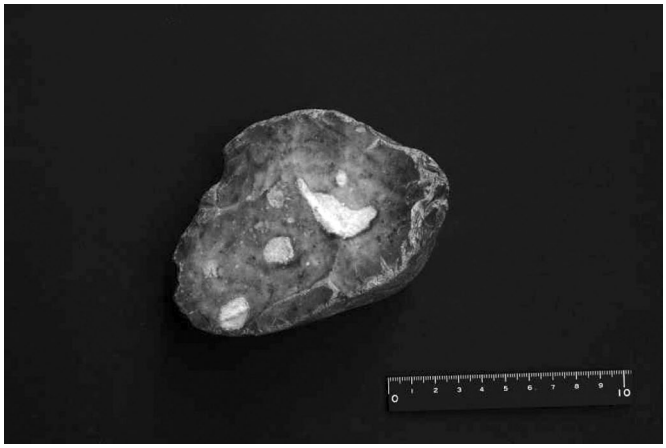

Fig. 7 A Bronze Age flint core discovered near the Quaternary fluvial deposits.

Fig. 8 Close view of gravel layers in the Quaternary fluvial deposits.

2. Collection of Botanical Remains from Tell Ghanem al-Ali and Tell Shobbout, and Vegetation Survey of the Bishri Hills

Chie AKASHI (Post-graduate Student, Graduate School of Letters, Arts and Sciences, Waseda University, Tokyo) and
Kenichi TANNO (Associate Professor, Faculty of Agriculture, Yamaguchi University, Yamaguchi)

1. Tell Ghanem al-Ali

One soil sample from Square 6 and 9 samples taken at the previous excavation season were carried out with water flotation. Their total amount was about 50 littres. Some samples were rich in charred remains, including large fragments of charcoal. At least barley seeds were seen in the remains but we need further observation using a microscope. The charred plant remains collected will give us more information about the subsistence of Early Bronze Age.

Table 1 Charred Remains from Tell Ghanem al-Ali 2009.

No.	Square	Locus
TGA1-27	1	–
TGA1-30	1	76
TGA2-3	2	18
TGA2-6	2	43
TGA2-24	2	107
TGA2-42	2	140
TGA2-43	2	152
TGA2-44	2	155
TGA3-1	3	3
TGA6-1	6	1
Charred wood	6	1

Table 2 Charred remains from WS1 2009.

WS1-1	1A-1	N-S Section
WS1-2	1A-1	N-S Section
WS1-3	1A-1	N-S Section
WS1-4	1A-1	N-S Section
WS1-5	1A-1	2
WS1-6	1A-1	3
WS1-7	1A-1	6
WS1-8	1A-1	18
WS1-9	1A-1	21
WS1-10	1A-1	25
WS1-11	1A-1	33
WS1-12	1A-1	34
WS1-14	1A-1	41
WS1-15	1A-1	43
WS1-16	1A-1	45

2. Tell Shobbout

We took 16 soil samples from the trench sections and fill of the chamber of the tomb. Two of them belong to Roman period and the others are from the lower layers. In total 134 litters of soil was processed with water flotation. A few charred remains were recovered. They also need to be identified by microscope in Japan.

3. Vegetation survey of the Bishri hills

Vegetation of the Bishri hills was investigated from north (village of Ghanem al-Ali) to south (the Bir Sbai, southern edge of the Bishri hilltops).

We had tried the similar research in 2007, but it was not successful due to a sudden sand storm. The tentative results are shown in Table 3.

Table 3 Vegetation of Bishri hills from Ghanem Ali village to Bir Sbai.

position	main plant
0 km	(Ghanem Ali village)
8 km	Chenopodiaceae(Noaea type):70%, Astragalus spinosus:20%, Chenopidiaceae cf.:5%
14 km	Leguminosae:90%
23 km	Peganum harmala:50%, Solanum sp.:15%, indet.cf.Compositae:10%, Anabasis sp.:5%, Capparis spinosus
39 km	(hilltop) indet.cf.Compositae:95%, Peganum harmala, Hordeum murinum
41 km	(a basin after the peak) Elyngium sp.:40%, Compositae cf.Achillea:40%, Peganum harmala:15%, Centaurea sp., Hordeum murinum, Elemopyrum sp., Malva sp., Astragalus sp., Polygonum sp., Heliotropium sp., Mathiola cf.
43 km	Chenopodiaceae(Noaea type):70%, Anabasis sp.:25%, Euphorbia sp.
Bir Sbai	Nigella arvensis, Anchusa, Hipecoum, Hordeum spontaneum, Heliotropium, Apiaceae, Astragalus, Compositae, Calendula, Malva, Anabasis, Chenopodiaceae (Noaea type), Salsola cf., Labiatae, Alocea, Papaver

3. Sondage in Square 6 of the Site of Tell Ghanem Al-Ali

Katsuhiko OHNUMA (Professor, the Institute for Cultural Studies of Ancient Iraq, Kokushikan University, Tokyo)

Square 6 (3 m by 3 m) was established for sondage (trench excavation) in the northern part of the site of Tell Ghanem Al-Ali (Fig. 1). This square establishment was aimed to obtain significant information concerning the duration of the site exploitation in the Bronze Age and the intra-site functional variability.

As the result of the sondage, a pit grave was unearthed with human bones and 7 pieces of pottery. The human bones were not complete, with most of the skull and one of the legs missing. Two of the 7 pieces of pottery were unbroken and complete, but the resting 5 were broken, though not to a very high degree (Figs. 2 and 3).

Layers under the pit grave were not excavated in this working season, so the stratigraphy of Square 6 briefly described below is limited within the surface soil down to the base of the pit grave.

Layer 1: Surface soil, sloping slightly downwards into north direction in the thickmess of 10 to 15 cm.

Layer 2: Brownish-coloured hardened soil, 20 cm in accumulation at the thickest part, bearing sporadic and discontinuous lines of ash. Potsherds of the Early Bronze Age were unearthed from it.

Layer 3: Yellowish hardened soil. This layer had been cut down at the time of the making of the

pit grave. Potsherds of the Early Bronze Age were also unearthed from it. The cutting angle of the pit grave is not steep, suggesting that the pit had been dug shallow with simple and non-systematic cutting. It is highly likely, however, that the original pit had been deeper than is seen today, for the accumulation above the pit grave should have been weathered away to a very high degree.

Layer 4: Layer 4 is the construction level of the pit grave. The pit had been made by digging the surface soil down through Layer 3. The bottom of the pit was some 90 cm below the present surface of the tell at the deepest, but the northern-most part has been so much weathered as to be exposed as the tell surface. The outline of the pit was not of a circle shape but was a shape describable as meandering circle. This may suggest a simple and non-systematic construction of the pit grave. The human bones, though missing many parts, seem to have retained original posture of contracted burial, and the 7 pieces of pottery also seem to have retained original allocation.

Layers 1 and 2 overlying the pit grave contain Early Bronze Age potsherds, suggesting that in the area around Square 6, southern area in particular, there had stood some important building(s) of the Early Bronze Age. This suggestion is supported by the fact that fine quality objects, such as human and animal terracotta figurines and wheels of terracotta chariot, highly suggestive of important buildings such as residential center where these objects had been kept, have been found concentrated around Square 6 in the research so far undertaken.

The features of the pottery unearthed in our previous sondage in Square 2, which was established in order to confirm the stratigraphical sequence of the site of Tell Ghanem Al-Ali, demonstrate that the exploitation of the site started in the Early Bronze Age and ended within it.

Surface finds from the site, however, have so far suggested that this site was also exploited in the Middle Bronze Age, though seemingly on a far smaller scale than in the Early Bronze Age.

The pit grave in Square 6 overlies two Early Bronze Age structure complexes with different wall directions. This fact and the features of the pottery from the pit grave date it to the Middle Bronze Age.

It is highly probable that the site of Tell Ghanem Al-Ali was at its height in the Early Bronze Age and became diminished in later period in the Middle Bronze Age, with sporadic houses and simple pit graves on it.

If the assumption above is proven to be correct through future excavations, we can share the hypothesis advocated by many scholars that the Bishri region near Tell Ghanem Al-Ali fell into chaos immediately after the collapse of the Akkadian empire, with no political control. This hypothesis also advocates that many of the inhabitants in the region moved towards east and south, that is, Amorites' migration to Assyria and Babylonia.

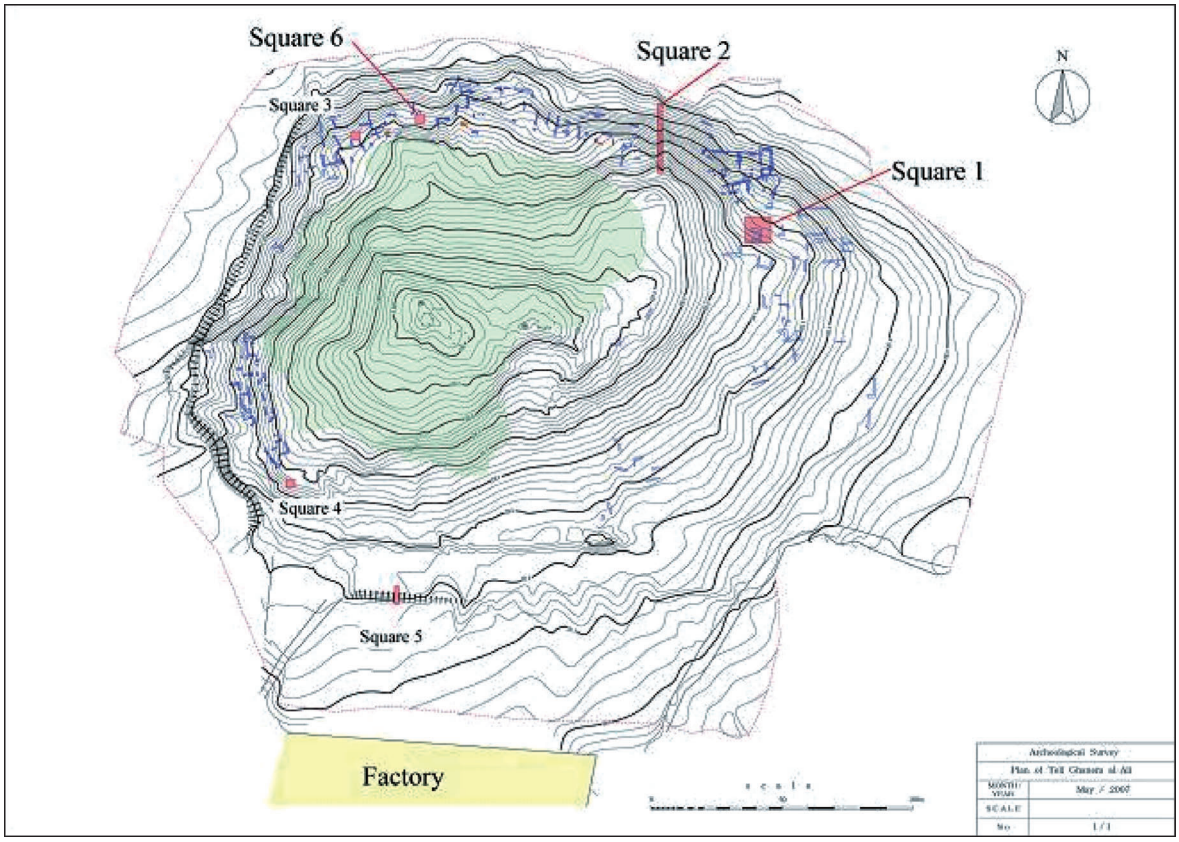

Fig. 1 Overall plan of Tell Ghanem Al-Ali showing Square 6 from which a pit grave was unearthed.

Fig. 2 Pit grave unearthed in Square 6.

Fig. 3 Unbroken complete pottery unearthed.

4. Soundings of hilltop burial mounds near Tell Ghanem Al-'Ali

Hirotoshi NUMOTO (Professor, Faculty of Physical Science,
Kokushikan University, Tokyo) and
Shogo KUME (Co-operative Research Fellow, the Institute for Cultural Studies
of Ancient Iraq, Kokushikan University, Tokyo)

1. Introduction and objectives

During the course of Syro-Japanese Archaeological mission to Jebel Bishri, investigations of Early Bronze Age burial grounds near Tell Ghanem al-'Ali has been conducted since 2008. The locations of those cemeteries adjacent to the settlement and the contemporaneous period of the two sites suggest the graves were established by the EBA inhabitants of Tell Ghanem al-'Ali. The last two seasons' researches including cleaning and survey of the seriously plundered grave-clusters have demonstrated several significant results, such as considerable collections of artefacts for dating, inter-/intra site variations of the individual grave-clusters, and their unique relationships to the landscapes (Numoto and Kume 2009a, 2009b).

The third season of the investigation (28th April to 21st May, 2009) focused on soundings of two burial mounds called Tell Shabbout by locals situated on the northern edge of Bishri plateau, approximately 1 km south from Tell Ghanem al-'Ali (Fig. 1). The aims included documentation of EBA burial structures and salvage of contemporary artefacts, since the surfaces of the mounds have clearly indicated several robbers' pits, suggesting intensive plunderings in modern and antiquity have seriously disturbed their material traits. Because the visible hilltop location of the mounds, overlooking Tell Ghanem al-'Ali, implies some monumental or elite nature of the tombs, the goals designed above possibly contribute to an assessment of characteristics of the burials as well.

2. Sounding at Tell Shabbout 1

This mound situated on high bluffs between Wadi Shabbout and a small unnamed wadi, some 279 m above see level. The mound itself measures approximately 15 m in diameter and 3 m in height from the surface. As an excavation method, a 2 m-width trench was laid out to document the stratigraphy of the mound and excavated to the bedrock. The trench was also enlarged to unearth the main chamber or other archaeological features. The stratigraphy indicated the mound contained ca. 2 m high natural hillock including gypsum stone outcrop on the top, and comprised at least two main occupational phases, the earthen mound and the cairn.

Phase 1: cairn

A cairn was discovered beneath the Phase 1 earthen mound (see below). It seems that the cairn was seriously destroyed before construction of the earthen mound, disturbing reconstruction of entire structures of the cairn. However, the burial was apparently consist of three main elements; chambers, rings and mound (Figs. 2, 3).

1) Chambers

The main chamber was above-ground rectangular structure, measuring ca. 4.5 × 2.5 m in length and width (Fig. 4). The axis of the chamber approximately oriented to the geographical north towards Tell Ghanem al-'Ali. The surviving walls were ca. 70 cm in height and constructed of gypsum stone slabs in at least six to seven layers, using different sizes of slabs. No floor pavements were recovered, but flat surface of the gypsum stone outcrop on the top of the natural mound was apparently employed as the purpose. A narrow rectangular annex -some 40 cm width- was attached to the north of the main chamber (Fig. 5). As a result, the chamber demonstrates some T-shaped structure. Although

roofed stones were not clearly confirmed, monolithic stones might have covered the narrow space of the annex.

2) Ring walls and mound

The inner ring surrounding the main chamber and the annex has a diameter of some 7 m, arranging in three to four layers of different size of stones (Fig. 4). The outer ring that indicates the edge of the mound was poorly preserved. The traits indicate approximately 9 m in diameter, enclosing the entire mound of the cairn. The some 70 cm fill of the mound consist of greyish brown soils with fine gravels containing at least two to three layers of gypsum stone slabs in the SW quadrant.

Phase 2: earthen mound

A earthen mound was covering the earlier cairn described above and the original natural hillock, spreading overall of Tell Shabbout 1 (Fig. 1). The deposits of the earthen mound mainly consist of greenish grey brown soil with fine gravels. Although the height of the mound fills depends on conditions of surviving deposits of the earlier cairn, the maximum thickness of the fills was some 1 m at the point of the main chamber of the cairn.

Finds and dating

Intensive plunderings in modern and antiquity and scattered nature of the collection from Tell Shabbout 1 has disturbed dating of the discovered cairn and earthen mound. Nevertheless, evidence suggests the cairn was established in the Early Bronze Age, while later Roman/Byzantine people re-used the place as burial mound. For example, collected samples are sparsely including typical Early Bronze Age sherds (Fig. 6). On the other hand, deposits of the earthen mound have produced many fragments of Roman/Byzantine terracotta coffins (Fig. 7), suggesting the mound was used as a burial place in the period. A few isolated metal samples also demonstrates the place was used as a burial site in both periods of Early Bronze Age and Roman/Byzantine. In addition, a series of unique Bronze Age knapped stones that recently defined at Tell Ghanem al-‘Ali and other surveyed sites by the Syro-Japanese mission (Nishiaki pers. comm.) were abundantly collected from the site. A viewpoint of burial typology may support the dating. An Early Bronze massive cairn field contains similar cairns constructed of quarried gypsum stones has been discovered by the mission in the surveyed area, some 10 km southeast from Ghanem al-‘Ali (Nishiaki et al. 2009). Roman/Byzantine earthen mounds have frequently been reported in the Tabqa reservoir area on the Syrian Euphrates.

Sounding at Tell Shabbout 2

The burial mound is situated some 20 m to the south of Tell Shabbout 1, measuring ca. 10 m in diameter and ca. 1 m in height. Sounding of the mound was conducted according to similar procedures as Tell Shabbout 1. Stratigraphic observations indicated the mound was artificially constructed on the low -approximately 40 cm- natural mound, containing two graves.

Grave 1

A pit grave was discovered beneath the artificial mound, cutting into the bedrock. The burial chamber measures ca. 2.8 × 1.2 m in length and width, and ca. 0.6 m in deep (Fig. 8). The orientation of the chamber was roughly NW-SE direction. The southeastern edge of the chamber has been cut, constructing a step-like structure. On the other hand, a 20 cm deep small pit was excavated on the bottom of the northwestern side. Function of the pit is still uncertain. The grave was surrounded by a ca. 80 cm high semi-circular stone wall built of undressed gypsum stones in different sizes. Because the wall is built on the bedrock, it is quite probable that those structures were constructed in contemporary time. However, purpose of the stone wall and relationship to the chamber remain

uncertain. Very few materials were collected from the chamber, including fragments of Roman/ Byzantine terracotta coffin.

Grave 2

A terracotta coffin burial was discovered on the eastern surface of the mound, cutting the stone wall described above. The size of the coffin measures ca. 2.0 × 0.6 m in length and width and 0.3 m in deep. The orientation of the burial was roughly E-W direction. Undisturbed condition of the burial produced a complete human remain (Fig. 9), but no burial goods were recovered apart from some stones set on the surface of the burial, perhaps for the purpose of marking or the like. Analysis of the human remains is still in progress. Accordingly, no information of the bones has thus far been obtained.

Dating

Because of sparse samples recovered from the mound, dating of the structures remains difficult. However, collected materials predominantly consists of the Roman/Byzantine period, including the complete coffin unearthed from grave 2, suggest all structures could be tentatively dated to the Roman/Byzantine period.

Summary

The third season targeted on soundings at two burial mounds demonstrated a unique burial practice in the study area, implying continuous selections of the hilltop as a funerary space from the Early Bronze Age to the Roman/Byzantine periods. However, considering the overall goals of the Syro-Japanese joint project to Jebel Bishri, of particular note is discovery of the cairn at Tell Shabbout 1 in the surroundings of Tell Ghanem al-'Ali. Cairns in the Near East suggests burial customs practiced by mobile people in general. For example, investigated several cairn fields as part of the project has been situated on the northern flank of the Bishri mountains, where mean annual rainfall is less than 200 mm, suggesting grazing area for mobile pastoralists (Fujii 2009, Fujii et al. 2009). If the hilltop location of the discovered cairn at Tell Shabbout 1, directly oriented to Tell Ghanem al-'Ali, implied some monumental or elite nature of the tomb, the origin or ancestors of the inhabitants of the settlement might have more close connection with mobile ways of life than sedentary. This assumption remains to be tested, since obtained archaeological data from the site has been restricted to date. Further explorations in the field and laboratory have still been required.

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Fig. 1 Tell Shabbout 1 and 2 before soundings, overlooking Tell Ghanem al-'Ali.

Fig. 2 Cairn discovered beneath earthen mound at Tell Shabbout 1, looking north.

Fig. 3 Discovered cairn at Tell Shabbout 1, looking south.

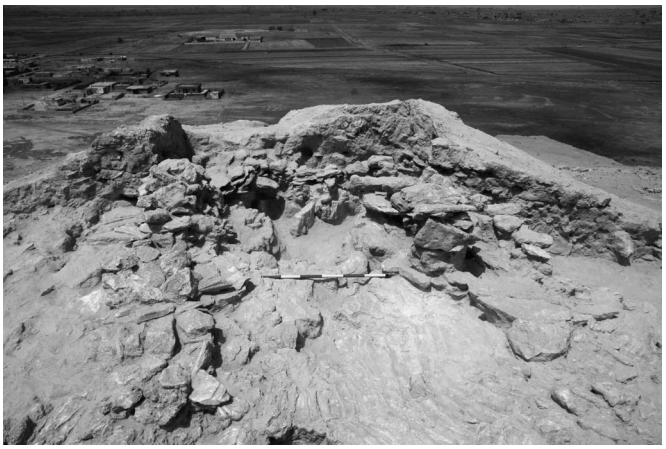

Fig. 4 Main burial chamber of the cairn. A seriously disturbed above-ground structure was preserved, looking north.

Fig. 5 Inner ring and northern wall of annex, looking east.

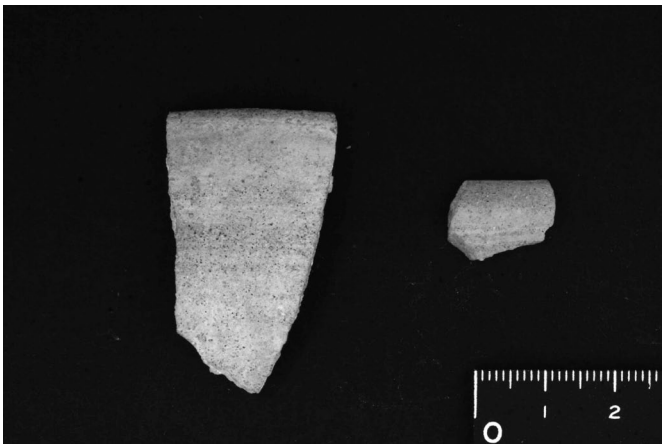

Fig. 6 Possible Early Bronze Age sherds from Tell Shabbout 1 (Left: hemispherical bowl; Right: Euphrates Fine Ware).

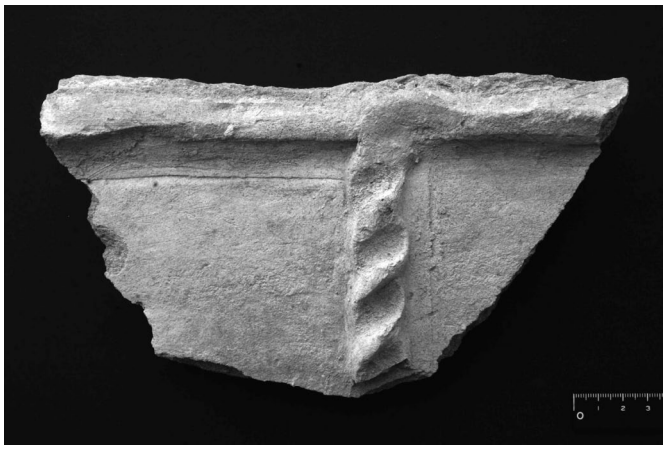

Fig. 7 Fragment of Roman/Byzantine terracotta coffin from Tell Shabbout 1.

Fig. 8 Pit grave and surrounding stone wall at Tell Shabbout 2, looking southwest.

Fig. 9 Undisturbed terracotta coffin burial and human remain.

5. A Short History of Ghanem al-Ali Village: An Ethnoarchaeological Study on the Modern Islamic Cemeteries

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Tell Ghanem al-Ali has been one of the focuses of Syro-Japanese archaeological project to Jabal Bishri since 2007. This Early Bronze Age settlement was located just northeast of a modern village of the same name. The top of the mound has been covered with modern Islamic graves of the villagers. They seem to be an obstacle for the archaeological excavations. However, it will give us a chance to study the formation of cemetery, one of the integral materials for the archaeological studies. In addition to the mound top cemetery, the Ghanem al-Ali villagers have other four cemeteries within the village itself. Therefore, I was interested in the relationship between the cemeteries and human groups. For understanding of this relationship, I started to gather the information from the villagers about the history of Ghanem al-Ali village in 2007 (Tsuneki, A. 2008 "A Short History of Ghanam al-Ali Village", *Al-Rafidan* 29:184–190). Based on this information, a field survey of the modern cemeteries was carried out on May 23–25, 2009. This is a primary report of the results of this short ethnoarchaeological survey.

Ghanem al-Ali Villagers

The location and the basic data of Ghanem al-Ali village was reported in the former article (Tsuneki ibid.). Here, I only summarize the important data for studying the relationship between human groups and cemeteries.

The number of the present villagers counts around 10,000, and all of the villagers belong to Bu-Shaba'an *Qabila* and al-Subeat *Ashira*. Therefore, they belong to the same human groups in tribal level. However, *Ashira* can be divided into ten *Aila*s based on the lineages. Fig. 1 shows the lineages of the modern Ghanem al-Ali villagers.

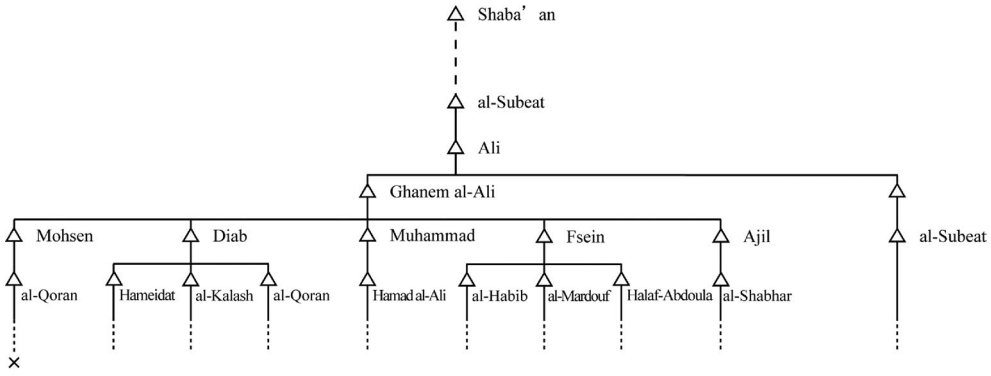

Fig. 1 Lineages of Ghanem al-Ali villagers.

Ghanem al-Ali, the original ancestor of the villagers, had five sons; Mohsen, Diab, Mohamad, Fsein, and Ajil. Each son had his own sons as follows.

Mohsen; al-Qoran
Diab; Hameidat, al-Kalash, al-Qoran
Mohamad; Hamad al-Ali
Fsein; al-Habib, al-Mardouf, Halaf-Abdoula
Ajil; al-Shabhar

The descendants of eight sons, without those of al-Qoran of Mohsen, have continued to live together

and consist of the basic big families (*aila*), in former and present Ghanem al-Ali village. The former small village was located along the Euphrates River, about 2 km north of the modern village, and the villagers has used Tell Ghanem Ali as their graveyard since their former village period. This former riverside village was severely damaged by the flood in 1947, and the people decided to move to the present place near the cliff of the river terrace. Therefore, the modern Ghanem al-Ali village has been inhabited since 1947. The people of Al-Subeat, another big family, started to inhabit the village from that time. Before 1947, they had another small riverside village apart from the former Ghanem al-Ali village. They are not the direct descendants of Ghanem al-Ali, though their ancestor was the brother of Ghanem al-Ali.

Residential Areas

Therefore, we can recognize nine big families in the present Ghanem al-Ali village. The distinction of big families may affect the daily life of the villagers. Fig. 2 shows the residential area of each big family.

The population of al-Shabhar *aila* is quite limited (only a few households), and they were excluded in the study of residential and cemetery systems. Though the number is quite small, Al-Shabhar family have been respected by other villagers, because they has served as local judge, called *Mhtar*. The supra-*aila*s (Mohsen, Diab, Mohamad, Fsein Ajil) also affect the residential system. For example, the descendants of Fsein, i.e., al-Habib, al-Mardouf and Halaf-Abdoula, share the neighboring areas in the northwestern part of the village. The people of al-Subeat, a sole big family originated from non-direct brotherly descendants and joined Ghanem al-Ali later, share the western edge of the village near Wadi Harar. The division of residential area based on *aila* has been strictly kept since the beginning of the village, and each residential area has extended from the north-central part of the village. Some *aila*s like Hameidat and al-Qoran jumped into a detached block beyond their original residential areas.

Modern Cemeteries

The *aila* distinction affected not only the residential system, but also the cemetery system. Five cemeteries have been used by the Ghanem al-Ali villagers (Fig. 1). For analyzing the locations of each grave in the cemeteries, the author used Quick Bird space image which was photographed on April 28, 2009.

Cemetery 1: It is constructed on the surface of Tell Ghanem al-Ali, and it is the largest and oldest cemetery for the villagers. Over one thousand graves were visible on this cemetery. The number of graves is very difficult to count correctly, because old graves were weathered by exposure and their gravestones were fell down and destroyed.

The villagers believed that this cemetery was started by putting up the grave for a *sheikh*, named Mohanmad al-Shoukh, on top of the mound. His grave was encircled by a stone wall with the grave of his son, Ahamad al-Shoukh. They belong to Hamad al-Ali *aila*. Seven such *sheikh*'s encircled graves were visible on top of the mound (Fig. 3). Two in the east belong to Hamad al-Ali *aila*, and four in the west belong to Mardouf *aila*. These *sheikh*'s graves were worshipped as the village's folk remedy. The villagers come to here to pray for curing their diseases.

The graveyard has been extended around these *sheikh*'s graves. Therefore, the nearer to the center of the cemetery, the older graves we encounter. Unfortunately, the old graves lack an epitaph on a gravestone. Most of the gravestones were mere natural gypsum stone. Therefore, we cannot check up the name of the dead and his/her passing year. The graves in the periphery of the cemetery are newer, and most of them have a gravestone with epitaph. The oldest passing year of the epitaph is 1937, which was engraved on the re-built gravestone on the mid-slope of the mound in the northwestern

part of the cemetery (Hameidat block). It is clear that this cemetery has been used before the establishment of the modern Ghanem al-Ali village. It can date back to at least over one hundred years. Though we encounter a gravestone with 1949 passing year, most of the old gravestones with epitaph tell the passing year of 1960s. The number of graves in Cemetery 1 seems to decrease from 1970s, because the villagers began to construct their cemeteries inside the village. However, some families continue to use Cemetery 1 as their graveyards. They wanted to go to their final resting place with their grandfathers and fathers. So, we encounter the new graves, especially in the periphery of the cemetery. Based on the epitaphs of the gravestones and villagers' information, the big families (*aila*s) have shared the different areas of the Cemetery 1 (Fig. 4). The regulation of locality of graves for each big family has been kept since the beginning of cemetery.

Cemetery 2: This cemetery is located on the right bank of Wadi Harar, west of al-Subeat residential area (Figs.1 and 5). It was constructed for al-Subeat *aila* in the beginning of 1970s. There are about one hundred burials in this cemetery, and all of the graves belong to al-Subeat *aila*. This *aila* can be divided into four sub-*aila*s; Faraj, Hodr al-Subeat, Gorto and al-Fjeini. These sub-aila divisions are related to the locations of graves. The graves of Faraj sub-*aila* are located in the northwestern part of the cemetery, with the graves of Gorto sub-aila. Hodr al-Subeat sub-aila share the southwestern part, and al-Fjeni sub-aila share the northwestern part. There are small vacant lots between these three blocks (Fig. 6). As the marriages happen frequently between these sub-*aila*s, we can observe some brides' graves in each block.

Though the grave locality of each sub-*aila* has been kept severely, we cannot observe remarkable regularity among the gravestone types. Many types of gravestone were used in this cemetery. Though the older type was a simple gypsum stela, new types of gravestone have been made of concrete models (Fig. 7). Many new type gravestones were used for all sub-*aila*s in this cemetery. In other words, I cannot point out any regularity between gravestone types and sub-*aila*s. This is also the case in other cemeteries of Ghanem al-Ali. Nowadays, the people buy the gravestone from the gravestone factories, and each factory makes its own type of gravestone (*shahida*). The difference of gravestone types depends on the factory, and it is not related to *aila*s.

Cemetery 3: This cemetery is located in the western part of the village, at the junction of the residential blocks of al-Habib, Halaf-Abdoula, and Hameidat *aila*s. It was made on a small natural hill (Fig. 8), and this hill has been used as cemetery for the descendants of Fsein, i.e., al-Habib, Halaf-Abdoula and Mardouf *aila*s, since the middle of 1970s. The very close relationship between these three *aila*s can be seen not only in the residential localities, but also in the cemetery system. They always share the same locality in Cemetery 1 and Cemetery 3. Cemetery 3 consists of about 150 burials. Though the localities within the cemetery can be roughly divided, they are intermixed each other (Fig. 9). The first burial of Cemetery 3 is a grave of Halaf Mohamad Habib on the top of the hill. His passing year is 1976. Then, the cemetery extended from the hilltop toward the foot.

Cemetery 4: It is located below the cliff of the Euphrates river bank, at the southern junction of Hameidat and al-Qoran residential areas (Fig. 10). Cemetery 4 has been used by these two big families. Both of them are the descendants of Diab supra-*aila*. The first grave of the Hameidat is that of Fsein Ali Hameidat, who died in 1965. His grave is located at the center of the cemetery (Fig. 11). The first grave of the al-Qoran group is that of Halaf al-Salem, dug in 1973. Then until now, about 300 people were consigned in this cemetery. The graveyard locality of each *aila* is relatively well defined. The Homeidat graves share the southwestern part of the cemetery, and the al-Qoran graves were located in the rest parts. In other words, they have constructed their graves in nearer location from their residential blocks. Four square-shaped concrete-made graves were constructed in the al-Qoran

block (Fig. 12). They are the graves belonging to a same rich family.

Cemetery 5: It is also located below the cliff of the Euphrates river bank (Fig. 13). It has been constructed near Wadi Ges, at the junction of Hamad al-Ali and al-Kalash *aila*s' residential areas. This cemetery has been for these two *aila*s. However, these two big families do not belong to the same supra-*aila*. Hamad al-Ali was the son of Mohamad, and al-Kalash was the son of Diab. This division strictly reflects the cemetery structure. The small wadi divides this cemetery into two graveyard blocks (Fig. 14). The western bank has been used for the graveyard of Hamad al-Ali, and the eastern bank for that of al-Kalash. Curiously enough, these graveyard locations are reverse to the residential areas of two big families. Each *aila* makes its own cemetery beyond its residential area. Therefore, we must understand that there are two independent cemeteries in Cemetery 5.

Al-Kalash cemetery consists of about one hundred graves. The first grave of this cemetery is that of Ahamad Seid Hamadi, who died in 1973. It is located in the northeastern part of the block. The older graves are located in this part (Fig. 15). Therefore, al-Kalash cemetery started from the northeastern part, then, extended to southwest toward the wadi.

Hamad al-Ali cemetery consists of over two hundreds graves. The first grave was constructed for abdo al-Dahil in 1976. It is located in the northernmost area of their cemetery. Old graves are visible in this area (Fig 16). Then, the cemetery extended toward southwest, climbing up the slope.

Some Remarks

Ethnoarchaeological study on the modern cemeteries of Ghanem al-Ali village gives us a chance to consider the relationship between space locality and human groups. In general, we can evaluate that grave locality reflects the relationship of human groups relatively well. Let us review five cemeteries of Ghanem al-Ali. We can observe the strict space division system based on *aila*s in Cemetery 1. The system is very similar to that of residential areas. The peripheric character of the location of Cemetery 2 directly reflects the situation of al-Subeat *aila*, i.e. non direct descendants of Ghanem al-Ali. The intermixed character of Cemetery 3 reflects the close kinship and immediate relations between three *aila*s, which have the same supra-*aila*. The reason for such close relations is probably due to the size of the population of these *aila*s. The size of each *aila* is relatively small. Therefore, they have tried to contact closely through marriages within their supra-*aila* for keeping an appropriate population size. Cemetery 4 reflects the relatively large-sized *aila* groups. Two *aila*s, having the same supra-*aila*, in this cemetery can survive through marriages within its own *aila*. They construct the cemetery together, but the locations of each big family's graves have not been much intermixed. Cemetery 5 reflects two independent *aila*s. Their supra-*aila*s are different, and their graveyards have never been intermixed.

Therefore, the state of each cemetery reflects various relations of human groups. If we study the archaeological materials carefully based on such kind of viewpoints, we may have the chance to find something somewhere that would give us a clue to the ancient human relationship.

Fig. 2 Map showing the residential area for each big family at Ghanem Ali village. We must notice that each big family shares the different area within the village.

Fig. 3 One of the Sheikh's graves.

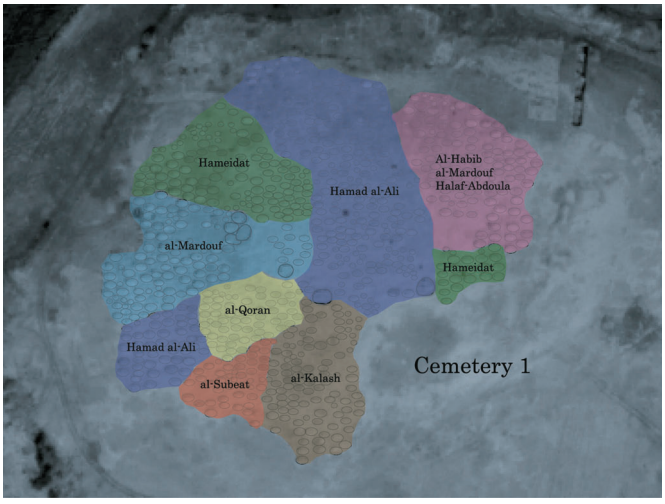

Fig. 4 Cemetery 1. The graveyard of each big family was shown in different color.

Fig. 5 General view of Cemetery 2.

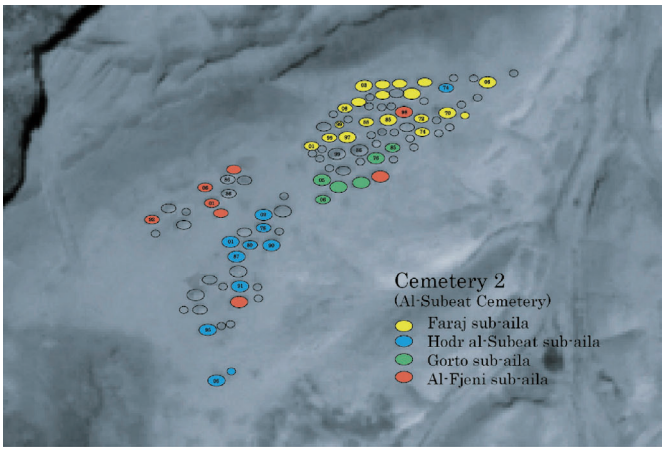

Fig. 6 Schematic plan of Cemetery 2.

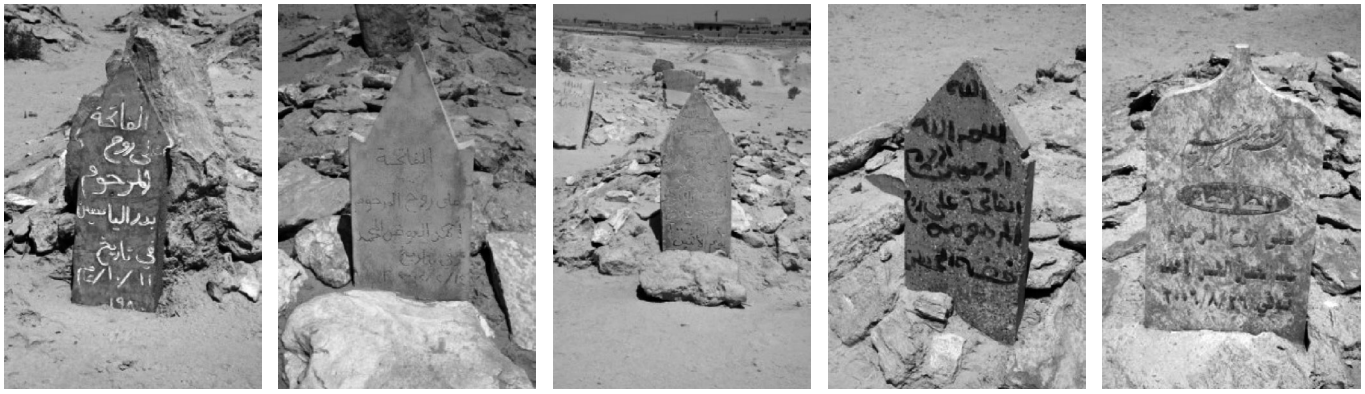

Fig. 7 Various models of new type gravestones made of concrete visible in Cemetery 2.

Fig. 8 Cemetery 3.

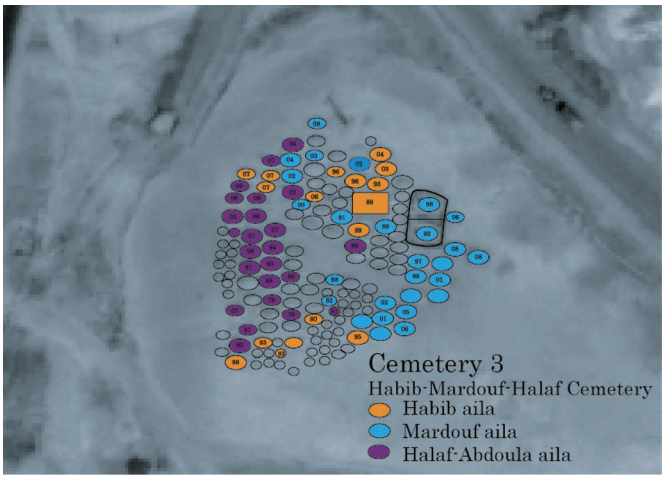

Fig. 9 Schematic plan of Cemetery 3.

Fig. 10 Cemetery 4.

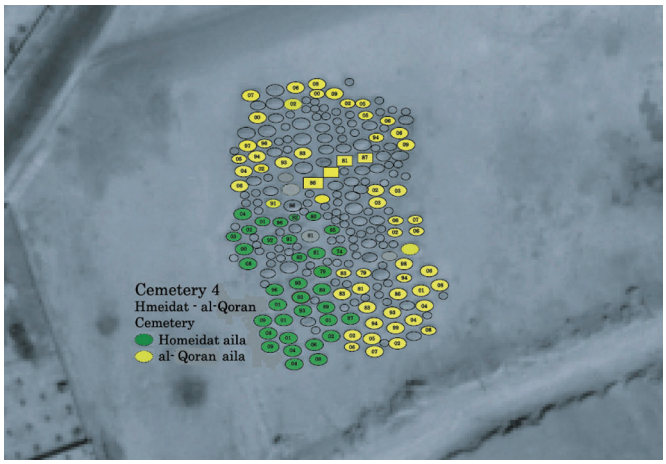

Fig. 11 Schematic plan of Cemetery 4.

Fig. 12 Northern part of Cemetery 4. Concrete-made graves were visible in the right.

Fig. 13 Cemetery 5.

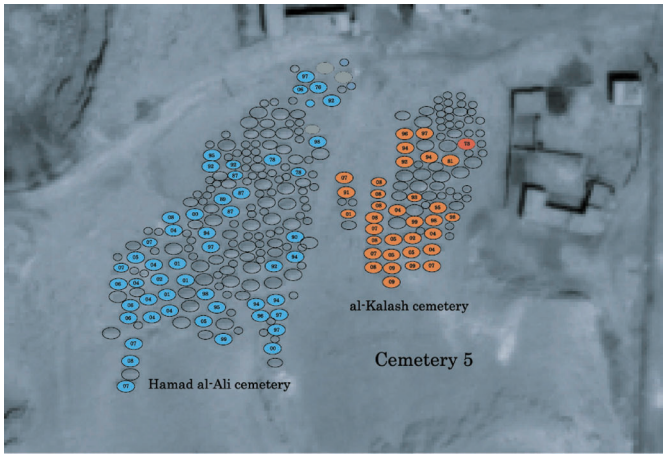

Fig. 14 Schematic plan of Cemetery 5.

Fig. 15 Old graves in al-Kalash cemetery.

Fig. 16 Old graves in Hamad al-Ali cemetery.

6. An Archaeological Survey of Bronze Age Cairns in the Northwestern Flank of Jabal Bishri (II)

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Kae SUZUKI (M.A. Student, Kanazawa University)
Kyohei INOUE (B.A. Student, Kanazawa University)

1. Research objective and history

Our research objective is to locate specific footprints of Bronze Age pastoral nomads in the Bishri mountains and, in so doing, shed new light on the traditional issue of *Mar-tu* /*Amurru*, a large foreign population that Sumerian and Akkadian cuneiform texts refer to in connection to the area. For this purpose, we conducted a series of archaeological investigations since the first field season in May of 2007 (Fig. 1). This season falls on the sixth campaign.

The first field season was devoted to a brief survey of the research area, which located four cairn fields in a limestone hilly terrain to the east of Bir Rahum (Fujii 2008). The second field season, conducted in March of 2008, embarked on a sounding of the Hedaja Cairn Field 1, one of the four sites located in the first season (Fujii 2009). BC-10 was tested and tentatively dated to the end of the Early Bronze Age or the beginning of the Middle Bronze Age. The third field season, undertaken in November of the same year, continued the intensive investigation of the Hedaja Cairn Field 1 and sounded a total of nine cairns (RHD-1/BC-09~01) (Fujii et al. 2009a). The fourth season also focused on the Hedaja area and examined a total of seven cairns at the three sites in the area (RDH-1/BC-11~14, RHD-3/BC01~02, and RHD-4/BC-01) (Fujii et al. 2008b). The series of investigations enabled us to establish a typological sequence of Bronze Age cairns in the Hedaja area. In order to test the sequence at other site, the fifth season in May of 2009 moved southward to the Tor Rahum Cairn Field 1 and conducted a limited sounding of a total of eighteen cairns (Fujii et al. 2009b). As a result, it turned out that the Hedaja sequence was applicable to the site too.

2. Survey results

The sixth field season, our main concern, returned to a general survey. This is because we felt the necessity for figuring out the distribution of the Bishri cairn fields on the basis of the previous investigation results. Due to time constraints, our survey focused on the southern half of the research area. The survey registered the following eleven cairn fields along Wadi Rahum, one of the major drainage systems in the area.

Wadi Rahum Cairn Field 1

This cairn field was located on an elongated table hill lying ca. 1 km north of the Tor Rahum Cairn Field 1. A total of thirty-five cairns were confirmed along its southern edge (Fig. 2). They included a few large examples with a diameter of more than 10 m. Among those was BC-129, which measured ca. 9-11 m in diameter and ca. 0.7 m in relative height (Fig. 3). It was accompanied with a cist wall, a peripheral wall, and a pair of tails more than10 m long. There is little doubt that the cairn falls into the Phase 1 of the Hedaja sequence, although as was the case of other cairn fields, no datable surface finds were found on and around the mound.

Wadi Rahum Cairn Field 2

This cairn field was extended ca. 0.8 km on a table hill stretching to the east of the Wadi Ruhum Cairn Field 1 (Fig. 4). A total of thirteen cairns were recorded along its southern edge. The largest of them was BC-107, which measured ca. 7.5 m in diameter and ca. 0.4 in relative height (Fig. 5). Three masonry walls – a cist inner wall, a cist outer wall, and a peripheral wall – were identified on the mound, suggesting that it falls into the Hedaja Phase 1 type.

Wadi Rahum Cairn Field 3

Located further to the east of Wadi Rahum Cairn Field 2, this cairn field contained a total of eight cairns. Here again, they were dotted along the southern edge of a hilly terrain stretching east to west. BC-108 was the largest of them, measuring ca. 9 m in diameter and ca. 0.7 m in relative height (Fig. 6). It appears to belongs to the Hedaja Phase 1 or 2 type.

Wadi Rahum Cairn Field 4

This cairn field occupied the southern edge of a chain of gentle hills lying ca. 1 km north of Wadi Rahum Cairn Field 2. It consisted of fifteen cairns and stretched ca. 2.4 km in total length. BC-114 and BC-115, both occupying the eastern edge of the site, were the largest in size, measuring ca. 9-10 m in diameter and ca. 0.9-1.0 m in relative height (Fig. 7). Both of these were accompanied with a peripheral wall, an indicator of the Hedaja Phase 1 type.

Wadi Rahum Cairn Field 5

This cairn field, ca. 0.8 km in total length, stretched to the east of Wadi Rahum Cainr Field 4 with a large wadi (Wadi Huenize) just in between. A total of five cairns were recorded, again, along the southern edge of an undulating limestone hill. BC-105 was the largest, having a diameter of ca. 8 m and a relative height of ca. 0.7 m. Its original cobble mound was topped with a newly-built twin cairns, which is called Rujm Huenize by local inhabitants (Fig. 8).

Wadi Rahum Cairn Field 6

This cairn field was extended ca. 0.9 km along the southern edge of an undulating hilly terrain overlooking the upper stream of Wadi Huenize. It contained a total of fourteen small to medium-sized cairns. BC-111 was the largest and measured ca. 6 m in diameter and ca. 0.2 m in relative height (Fig. 9). It appears to fall into the Hedaja Phase 2 type.

Wadi Rahum Cairn Field 7

This small cairn field occupied the top of an isolated hill ca. 1 km north of Wadi Rahum Cairn Field 6 and contained only three small to medium-sized cairns. Of interest was BC-102, which was accompanied with a boat-shaped stone concentration similar to Feature 01 of RHD-3/BC-02 (Fig. 10). In this light, it may be regarded as an example of the Hedaja Phase 2 type.

Wadi Rahum Cairn Field 8

This cairn field was extended along the southern edge of a gentle hill sandwiched between Wadi Rahum Cairn Field 7 to the west and the local asphalt road to the east. BC-101 was the largest of five registered cairns, measuring ca. 7-8 m in diameter and ca. 0.7 m in relative height (Fig. 11). It was encompassed with various small features, which included a ca. 15 m long freestanding wall and a few stone concentrations.

Wadi Rahum Cairn Field 9

Wadi Rahum Cairn Field 9 is a general term for five small to medium-scale cairns dotted on a hilly terrain ca. 1 km north of Wadi Rahum Cairn Field 5. There is nothing noteworthy, except that three large enclosures, possible evidence for domestic activities of cairn constructors, were found below BC-105.

Tor Rahum Cairn Field 2

This elongated cairn field is an eastern extension of Tor Rahum Cairn Field 1 that was comprehensively investigated in the last season. A total of sixteen cairns were located along the limestone escarpment ca. 3 km long that borders on the Homs prefecture (Fig. 12). BC-114 was accompanied with a large peripheral wall as well as several small features, suggesting a date equivalent to the Hedaja Phase I (Fig. 13).

Tor Rahum Cairn Field 3

This cairn field was extended on a foothill below the escarpment referred to above (Fig. 14). It contained a total of eight cairns including a few relatively well-preserved examples (Fig. 15).

Supplementary operation

In addition to the main operations described above, we conducted a mapping of the Rujum Hedaja Cairn Field 2 (RHD-2) that was located in the first field season and left intact thereafter. A total of sixteen cairns were recorded.

3. Summary

The survey newly located the eleven cairn fields in the southern half of our research area. Bronze Age cairns thus far registered in the area amount to 126 or 210 when 84 examples at the Tor Rahum Cairn Field 1 are also counted in. Furthermore, our preliminary inspections suggest that the northern half of the research area has an equal or even more number of contemporary cairns. It follows then that the research area, as a whole, contains several hundreds of Bronze Age cairns, a figure suggestive of a large unified population behind. There is little doubt that the northwestern flank of Mt. Bishri was a funerary center of Bronze Age pastoral nomads in northeastern Syria. A series of *in situ* finds from Hedaja Cairn Field 1 and Tor Rahum Cairn Field 1 suggests that the Bishri cairn fields lasted for a few centuries spanning from the end of the Early Bronze Age to the beginning of the Middle Bronze Age. It is perfectly possible, therefore, that they represent specific footprints of a branch or even the main body of *Mar-tu/Amurru*.

Nevertheless, three major issues still remain to be addressed. To begin with, the northern half of our research area is yet to be intensively surveyed. Second, comprehensively investigated sites have so far been limited to two: Hedaja Cairn Field 1 to the north and Tor Rahum Cairn Field 1 to the south. Third, even these two cairn fields are yet to be indisputably dated due to the scarcity of finds. Keeping these essential issues in mind, we would like to conduct further investigation.

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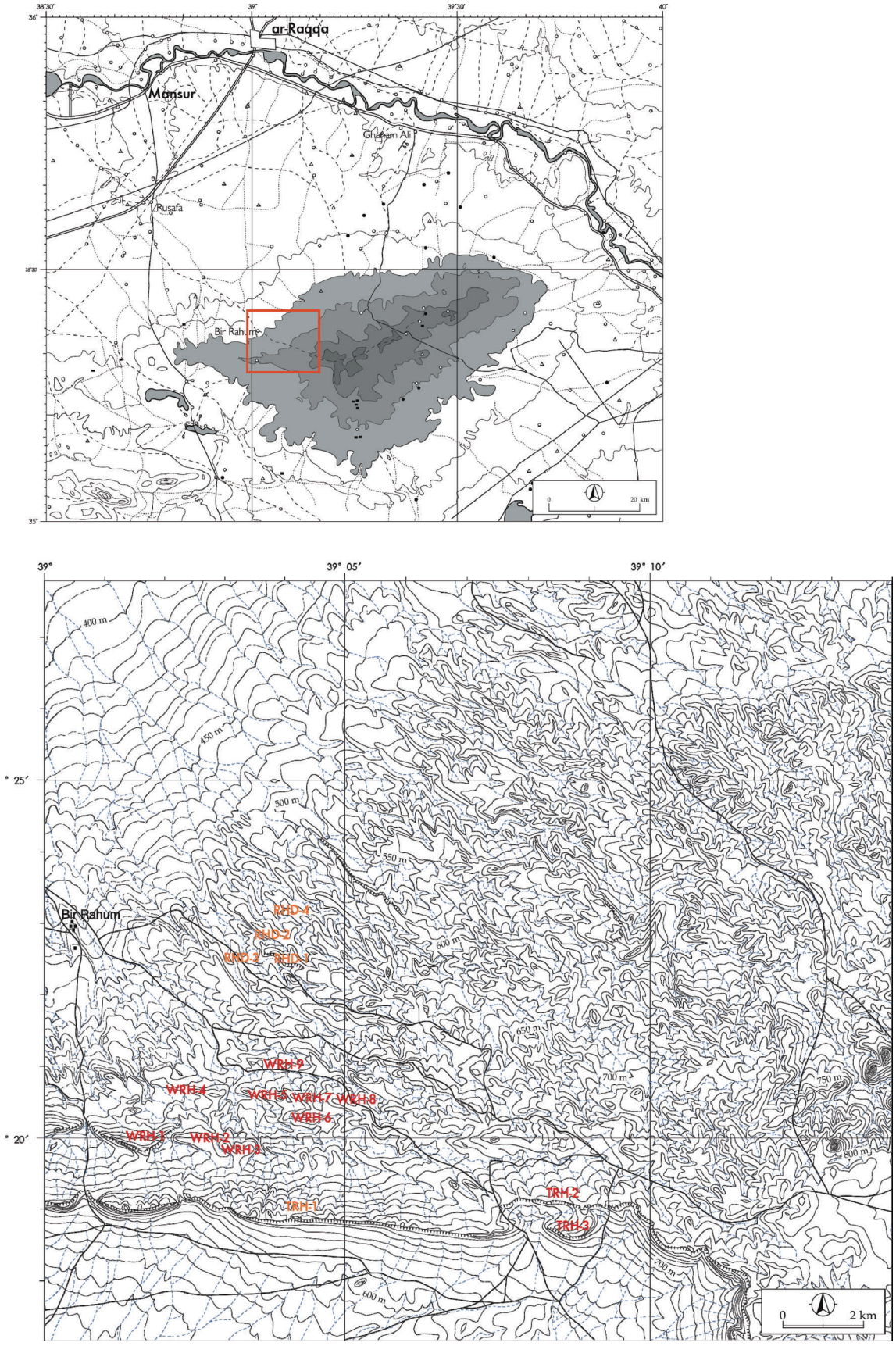


Fig. 1 Research area (above) and cairn fields thus far located (below).

Fig. 2 Wadi Rahum Cairn Field 1: general view (looking W).

Fig. 3 Wadi Rahum Cairn Field 1: BC-129 (looking E).

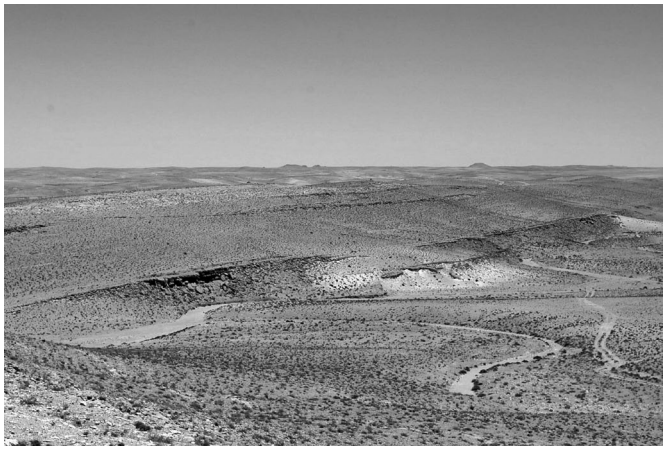


Fig. 4 Wadi Rahum Cairn Field 2: general view (looking NW).

Fig. 5 Wadi Rahum Cairn Field 2: BC-107 (looking S).

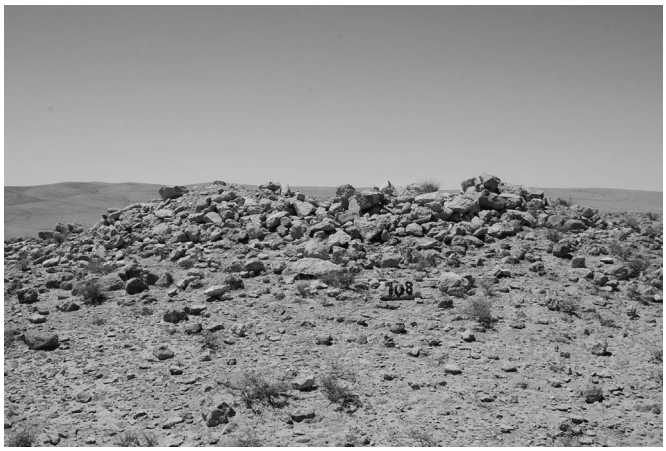


Fig. 6 Wadi Rahum Cairn Field 3: BC-108 (looking S).

Fig. 7 Wadi Rahum Cairn Field 4: BC-114 (looking S).

Fig. 8 Wadi Rahum Cairn Field 5: BC-105 (looking S).

Fig. 9 Wadi Rahum Cairn Field 6: BC-111 (looking E).

Fig. 10 Wadi Rahum Cairn Field 7: BC-102 (looking E).

Fig. 11 Wadi Rahum Cairn Field 8: BC-101 (looking S).

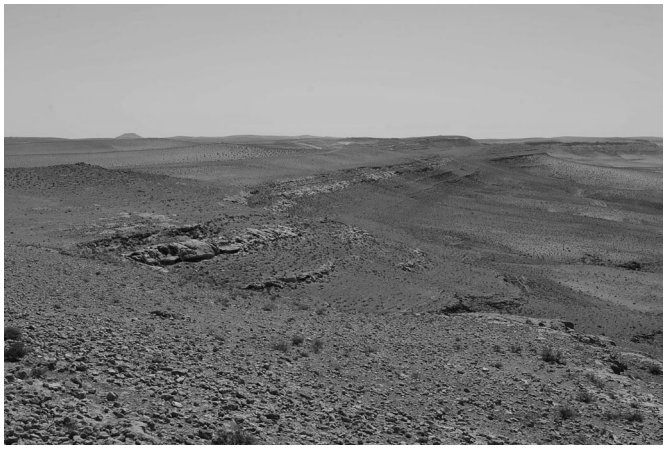


Fig. 12 Tor Rahum Cairn Field 2: general view (looking E).

Fig. 13 Tor Rahum Cairn Field 2: BC-114 (looking NW).

Fig. 14 Tor Rahum Cairn Field 3: general view (looking SE).

Fig. 15 Tor Rahum Cairn Field 3: BC-104 (looking S).

الموسم التاسع من أعمال البعثة الأثرية السورية اليابانية المشتركة العاملة في منطقة البشري

امتدت أعمال البعثة الأثرية اليابانية السورية المشتركة في منطقة البشري من تاريخ 28نيسان ولغاية 21 أيار من عام 2009 م

مدير البعثة : من الجانب السوري احمد سلطان ومن الجانب الياباني كاتسوهيكو اونوما 0

بداية نود توجيه شكر خاص للدكتور بسام جاموس المدير العام للآثار والمتاحف في سورية والدكتور ميشيل مقدسي مدير التنقيب والدراسات الأثرية في المديرية العامة للآثار والمتاحف والمشرف المستشار لهذا البحث , لمساهمتهم في إنجاح أعمال هذا الموسم

ففي موسم العمل هذا تم تنفيذ مجموعة من الأبحاث الأثرية التي شملت منطقة البحث بشكل عام والتي سنقدم شرح مفصل عن هذه الأبحاث وفق ما هو آتي :

أولا : **مسح اثري للمنطقة المحيطة بتل غانم العلي**

(يوشيهيرو نيشياكي ,بروفيسور جامعة طوكيو0 ساهي آبي ,باحث معهد الشرق في طوكيو)

حيث تم مسح معظم المواقع الأثرية المجاورة لتل غانم العلي والممتدة على الضفة اليمنى لنهر الفرات والتي تؤرخ إلى عصر البرونز, إذ شغلت منطقة البحث مساحة 10 كم امتدت من ضفاف نهر الفرات شمالا وحتى الحافة الشمالية لجبل البشري جنوبا ,حيث تم تقسيم هذه الدراسة إلى مجموعتين متكاملتين الأولى شملت المنطقة الممتدة على ضفاف الفرات أما الثانية فقد شملت الهضبة الجنوبية لنهر الفرات 0

يهدف هذا المسح إلى دراسة وتوثيق الخلفية التاريخية لمجتمعات عصر البرونز في هذه المنطقة الممتدة على طول نهر الفرات الأوسط , كذلك التعرف على طرق وأساليب استثمار الأراضي خلال عصر البرونز 0

فقد دلت المسوحات الأثرية التي جرت خلال المواسم الماضية إلى وجود أكثر من مائة موقع اثري في المنطقة المحيطة بتل غانم العلي شمالا وجنوبا , والتي امتد تأريخها من عصر الباليوليت وحتى عصور البرونز ,حيث قدمت هذه الدراسة وتقدم معطيات تاريخية مهمة متعلقة بالأهداف التي تم ذكرها

_ ففي المواسم الأولى من عمل هذا الفريق تم مسح منطقة وادي جزلة والذي يبعد حوالي 2كم إلى الغرب من تل غانم العلي , وكنتيجة لهذا البحث فقد تم الكشف عن مستوطنة تعود إلى عصر البرونز , بالإضافة إلى وجود مدافن لهذه المستوطنة تم الكشف عنها عند المجرى المنخفض لهذا الوادي ,ففي هذا الموسم تم إجراء المسوحات للمجرى العلوي من هذا الوادي (جزلة)والتي كشفت عن الامتداد الجنوبي لهذه المدافن ,

كما لوحظ امتداد واسع للمدافن العمودية (shaft graves) المنهوبة على امتداد هذا الوادي ,فقد تم الكشف في داخل احد هذه المدافن على ثلاثة جرار فخارية بحالة جيدة تؤرخ إلى عصر

أعمال المسح في الجهة اليسرى من وادي جزلة

البرونز الوسيط , لقد قدمت أعمال المسح الأثري التي تمت في منطقة وادي جزلة كمية من الأدوات الصوانية البرونزية كرأس سهم ومجموعة من السكاكين البرونزية و التي تعود إلى عصر البرونز,بالإضافة إلى مجموعة من الأدوات الحجرية التي تؤرخ إلى عصر النيوليت 0

_كما تم أيضا مسح منطقة وادي بيلوني والذي يمتد إلى الشرق من منطقة المسح ,وقد تم الكشف في هذه المنطقة عن نوع مميز من المدافن والتي تسمى بالمدافن الحلقية (Tumuli) إذ تبين وجود أكثر من مئة مدفن من هذا النوع والذي بني من الصخور الكلسية, ومن خلال دراسة تركيبة هذا النوع من المدافن تبين أنها مشابهة تماما من حيث الشكل والتركيب للمدافن الحلقية الموجودة في جبل البشري إلى الجنوب من هذه المنطقة ,والجدير بالذكر انه لم يتم العثور على أية مستوطنات سكنية مجاورة لهذا النوع من الدافن,غير أنها قريبة من مستوطنات سكنية مستقرة على الضفة اليمنى لنهر الفرات مثل (تل غانم العلي, تل حمادين ,تل جزلة) مما يساهم في إلقاء الضوء على أهمية هذا النوع من المدافن في المنطقة , وبنفس الوقت يساهم أيضا في شرح وتوضيح العلاقة القائمة بين المجتمعات المستقرة على حوض الفرات الوسط والمجتمعات المتنقلة في أعلى الهضبة الجنوبية المقابلة لنهر الفرات خلال عصر البرونز 0

_كما تم دراسة الاداوات التي اعتمدت عليها مجتمعات عصر البرونز والتي تم جمعها من حفريات موقع تل غانم العلي ,أيضا تم القيام بدراسة المصاطب النهرية القديمة الأربع لنهر الفرات ,إذ تبين وجود طبقات حصوية على طول المصطبة النهرية القديمة الممتدة من تل غانم العلي إلى الغرب وحتى الحافة الجنوبية للمنطقة المنخفضة 0

ثانيا دراسة البقايا النباتية من تل غانم العلى وتل شبوط بالإضافة إلى إجراء مسح للنباتات في منطقة البشري

(شي اكاشي :طالبة ,جامعة واسيدة 0 كيتشي تاننو : بروفيسور,جامعة ياماغوشي)

ففي تل غانم العلي تم دراسة مجموعة من العينات النباتية من الحفرية رقم 6 ,بالإضافة إلى 9 عينات نباتية كانت قد جمعت من التل في مواسم سابقة ,حيث تم تحليلها بواسطة استخدام طريقة التعويم المائي (الطوافة) , وكنتيجة لهذا التحليل تبين أن هذه العينات كانت غنية بالبقايا المتفحمة , حيث لوحظ وجود لبذرة الشعير ضمن هذه البقايا , إذ تحتاج هذه البقايا إلى تحليل أدق بواسطة استخدام تقنية الميكروسكوب 0 هذه الدراسة النباتية ستقدم معلومات اكبر واهم حول أنواع النباتات المستخدمة خلال عصر البرونز 0

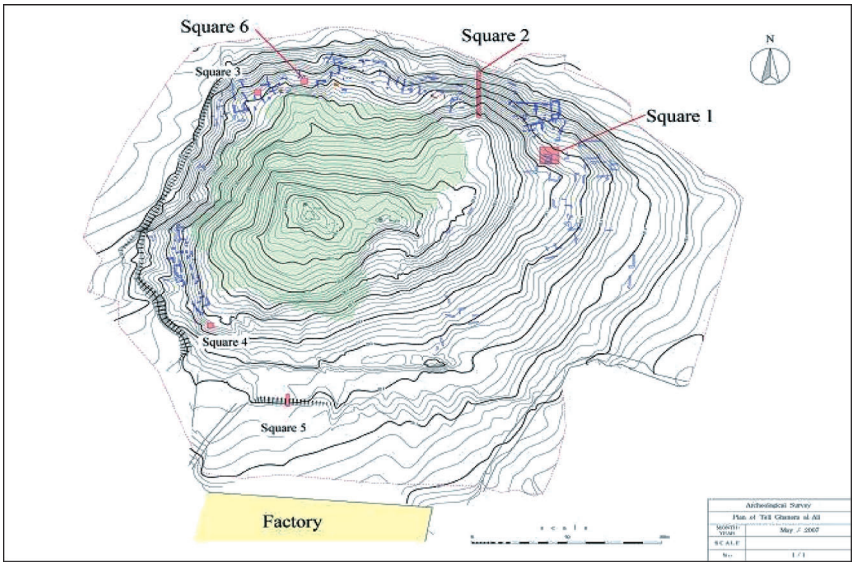
أما في تل شبوط فقد تم جمع 16 عينة نباتية من داخل الدافن الموجودة في المنطقة , اثنان من هذه العينات تم أخذها من مدفن يعود للعصر الروماني ,أيضاً تم الكشف عن كمية قليلة من

كما تم إجراء مسح في منطقة البحث للتعرف على النباتات الموجودة تركزت في المنطقة الممتدة من شمال قرية غانم العلي باتجاه الجنوب منطقة بئر سبيعي 0

ثالثا : إجراء سبر اختباري في موقع تل غانم العلى :

(كاتسوهيكو اونوما , بروفيسور جامعة كوكوشيكان)

فقد تم إجراء سبر اختباري في الجزء الشمالي الغربي من تل غانم العلي , تم فتح مربع صغير بقياس 3×3 م , ويهدف هذا السبر إلى الحصول على معلومات اكبر تتعلق باستيطان الموقع خلال عصر البرونز , تم الحفر غلى عمق40سم إذ تم الكشف من خلاله عن قبر يحتوي على عظام إنسانية يحيط فيها 7 أواني فخارية مختلفة الأشكال والأحجام , وكانت العظام الإنسانية غير كاملة مع فقدان أجزاء من الجمجمة أما بالنسبة للأواني الفخارية فقد كانت اثنتان منها بحالة جيدة وكاملة ,فيما كانت الخمس أواني الأخرى غير كاملة وبحالة سيئة 0



من خلال دراسة هذه الأواني الفخارية الموجودة ضمن حفرة الدفن يمكن تأريخ هذا القبر إلى بداية عصر البرونز الوسيط

لم يتم تنقيب السويات الأقدم من سوية القبر هذا الموسم , وعلى ذلك فإن التوضع الطبقي لهذا المربع من سطح التل وحتى سوية القبر الذي تم الكشف عنه قد اشتمل على :

هيكل عظمي محاط بمجموعة من الأواني الفخارية من الحفرية رقم6

السوية رقم (1) وكانت عبارة عن تربة سميكة 10سم وكانت هذه التربة منحدرة قليلا باتجاه الشرق 0

السوية رقم (2) بسماكة 20سم واشتملت على تربة بنية صلبة يتخللها خطوط متقطعة من الرماد السوية رقم (3) وهي تربة قاسية مائلة للخضار , وهي السوية التي قطعت فيها الحفرة المخصصة للقبر المذكور 0

السوية رقم (4) وهي السوية التي احتوت على القبر , أسفل هذه السوية بدأت تظهر تراكيب معمارية باتجاهات مختلفة تؤرخ إلى عصر البرونز القديم

أعمال المسح التي نفذت في مواسم سابقة لتل غانم العلي تظهر وجود مجموعة من الأبنية المهمة التي تؤرخ إلى عصر البرونز القديم , مما يؤكد ذلك هو العثور على مجموعة من التماثيل الطينية الإنسانية والحيوانية ,بالإضافة إلى دواليب لعربة طينية , وكذلك من خلال دراسة العينات الفخارية التي تم العثور عليها من المربع رقم2 في تل غانم العلي تبين أن فترة الاستيطان في تل غانم العلي قد امتدت خلال عصر البرونز القديم , كذلك أعمال المسح السابقة للموقع كشفت عن مجموعة من الأواني الفخارية التي تؤرخ إلى عصر البرونز الوسيط , مما يدل على أن تل غانم العلي كان مأهول أيضا خلال عصر البرونز الوسيط , ولكن بفترة اقصر من البرونز القديم 0 فمن الممكن أن تل غانم العلي كان على ارتفاع اكبر خلال عصر البرونز القديم , ومن ثم أصبح اقل ارتفاعا في مراحل لاحقة خلال عصر البرونز الوسيط , هذه النظرية

التي تم ذكرها سوف تكون مؤكدة بشكل صحيح خلال مواسم البحث اللاحقة من عمل هذه البعثة 0

مما يدفع إلى مشاركة عدد من الباحثين الأثريين في الفكرة التي تقول بان منطقة البشري المجاورة لتل غانم العلي كانت مأهولة بالسكان بعد انهيار السيطرة الأكادية مباشرة وهي الفترة التي فقدت فيها السيطرة السياسية على هذه المنطقة ,هذه الفكرة تؤكد بان معظم سكان تل غانم العلي قد تحركوا مع نهاية عصر البرونز القديم باتجاه الشرق والجنوب ,وهي الهجرة الأمورية المتنقلة عبر منطقة البشري إلى تشكيل الممالك الآشورية والبابلية 0

رابعا : <u>سبر اختباري في المدافن المجاورة لتل غانم العلي جنوبا :</u>

(هيروتوشي نوموتو, بروفيسور جامعة طوكيو 0 شوغو كومي طالب)

تتركز أعمال هذا الفريق من البعثة على دراسة وفهم طبيعة المدافن المتوضعة على قمة الجبل المجاور جنوبا لتل غانم العلي , إن قرب هذه المدافن من المواقع المتوضعة على حوض الفرات يدفع إلى محاولة ربط هذه المدافن بموقع تل غانم العلي والتلال المجاورة على طول نهر الفرات الأوسط بالإضافة إلى تأريخها لنفس الفترة الزمنية 0

فقد تركزت أعمال هذا الفريق في الموسمين الماضيين على القيام بمسح ودراسة المدافن المتعرضة للنهب من حيث التعرف على نمطها وأسلوب الدفن فيها , حيث قدمت هذه الدراسة مجموعة بالغة الأهمية من الحقائق والمعلومات التي ساهمت في تأريخ هذه المدافن 0

أما أعمال الموسم الثالث فقد هدفت إلى إجراء اسبار أختبارية لهذه المدافن التي تركزت في منطقة تل شبوط الواقعة على حافة الجبل المطل على تل غانم العلي (1كم جنوب التل), إذ تبين من خلال دراسة هيكلية هذه المدافن أنها تؤرخ إلى عصر البرونز القديم 0

وقد قسمت هذه المدافن إلى قسمين من تل شبوط : تل شبوط 1 وتل شبوط 2 :

اسبار مدافن تل شبوط 1 : التي تتوضع على جرف عالي بين واديين بارتفاع حوالي279م عن سطح البحر ويبلغ قطر هذا التل حوالي 15م وبارتفاع 3م عن سطح الأرض ,حيث تم فتح سبر بعرض 2م امتد من أعلى هذا التل بهدف الكشف عن التوضع الطبقي للتل

هذا التل قدم اكتشاف هام جدا بالنسبة لموضوع البحث,إذ تم الكشف ضمنه على نوع من المدافن الموجودة ضمن منطقة البشري وهو المدفن الحلقي (Tumulus) حيث تالف هذا المدفن من حجرة الدفن والأسوار الحجرية التي تتألف من الحجر الكلسي المختلف القياسات ,إذاً فإن الدلائل تشير إلى تاريخ هذه المدفن إلى عصر البرونز القديم , إن اكتشاف المدفن الحلقي في هذه المنطقة يدل على وجود العديد من هذه المدافن أيضا والتي تتألف من الأحجار الكلسية الضخمة

اسبار مدفن تل شبوط 2 : يتمركز هذا المدفن حوالي20م جنوب تل شبوط 1 يبلغ قطره 20م وبارتفاع 1م فقد تم إجراء السبر لهذا التل بنفس أسلوب وطريقة السبر لتل شبوط 1 حيث تم

الكشف عن قبرين توضعا أعلى هذا التل0حيث ظهر القبر الأول مشتملا على حجرة الدفن التي كانت بقياس 2.8×1.2 م وبعمق 60سم وباتجاه شمال غربي جنوب شرقي ويحيط بهذا القبر جدار من الحجر الكلسي مختلف الأحجام والقياسات ,دون وجود أي مكتشفات تذكر ضمن هذا القبر 0

أما القبر الثاني الذي تم الكشف عنه ضمن هذا التل فكان عبارة عن مدفن يعود إلى العصر الروماني والذي تألف من تابوت فخاري قاطعاً الجدار الحجري المحيط بالقبر الأول ,وكان هذا التابوت باتجاه شرق غرب , وقد عثر ضمن هذا التابوت على هيكل عظمي لإنسان من العصر الروماني 0

تل شبوط1 وتل شبوط2 قبل أعمال السبر(مطلاً على تل غانم العلي)

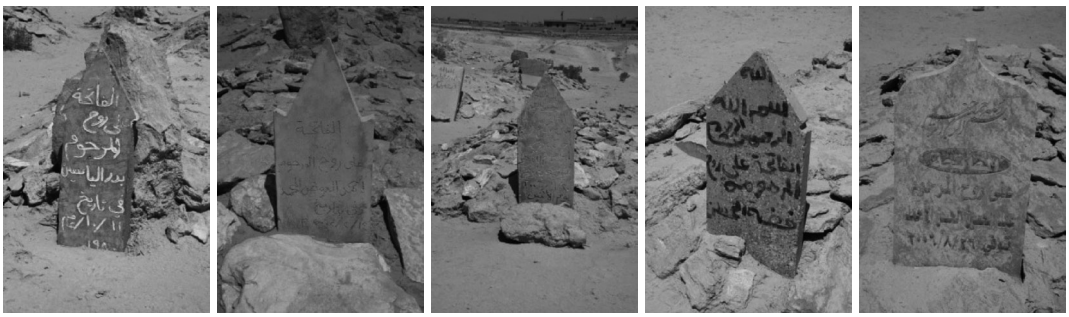
إذا كان من أهم نتائج أعمال هذا الموسم هو الكشف عن المدفن الحلقي (tumulus) الذي يتم الكشف عنه لأول مرة في هذه المنطقة , أيضاً يشير هذا النوع من المدافن الحلقية في منطقة الشرق الأدنى كما هو معروف إلى أنها تنسب لأشخاص متنقلين بشكل عام تنقلوا ضمن جبال البشري في منطقة معدل أمطارها لا تتجاوز 200مم , مما يدل على أنها منطقة رعوية شغلها الرعويين المتنقلون في المنطقة .

هذا أيضاً يدعم فكرة أن الناس الذين استوطنوا في تل غانم العلي من الممكن أن يكون لهم صله أو ارتباط بالناس المتنقلين ضمن منطقة جبل البشري0

خامساً : <u>دراسة إثنوغرافية للمقابر الإسلامية الحديثة المتوضعة فوق تل غانم العلي</u>

(اكيرا تسونيكي , بروفيسور جامعة تسو كوبا)

يعتبر موقع تل غانم العلي أحد أهم الأبحاث الرئيسية ضمن أعمال البعثة اليابانية السورية المشتركة في منطقة البشري , يقع هذا التل الذي يحتوي على مستوطنات تعود إلى عصر البرونز إلى شمال شرق بلدة تل غانم العلي الحالية,يغطي سطح هذا التل مجموعة من المقابر الإسلامية الحديثة التي تعود لأهالي القرية المجاورة 0



مجموعة من المدافن الحديثة المتوضعة فوت تل غانم العلي

وتهدف هذه الدراسة إلى فهم طبيعة العلاقة بين هذه المقابر وبين أهالي القرية المجاورة, بداية تم جمع المعلومات من أهالي القرية حول تاريخ بلدة غانم العلي التي يبلغ عدد سكانها حوالي 10 آلاف نسمة , وجميعهم ينتمون إلى قبيلة واحدة (البوشعبان) التي يتفرع منها العديد من العشائر , هذه العشائر تتوزع إلى عدد من العائلات وعلى ذلك تم تأكيد فكرة انتمائهم إلى مجموعة بشرية واحدة , إذ تبين أن بداية استيطانهم الأول في هذه المنطقة كان في البلدة القديمة التي تبعد حوالي 2كم إلى الشمال من البلدة الحالية وعلى ضفاف نهر الفرات , وفي عام 1947 ونتيجة تعرض البلدة للغمر بمياه الفرات مما اضطرهم بالتراجع جنوباً عن نهر الفرات حتى استقروا في البلدة الحالية وكان أهالي البلدة قد استخدموا تل غانم العلي كمقبرة لموتاهم منذ وجودهم في البلدة القديمة التي تعرضت للغمر

سادساً: مسح أثري للمدافن الحلقية (Tumuli) ضمن منطقة البشري

(سوميو فوجي ,بروفيسور جامعة كانازاوا0 كاي سوزوكي طالبة 0كايوهي إنو طالب)

يعتبر هذا البحث كجزء من أعمال البعثة السورية اليابانية المشتركة في منطقة البشري , ويهدف إلى تتبع آثار القبائل البدوية المتنقلة(الأمورية) في جبل البشري مع إلقاء الضوء على طريقة ظهور هذه القبائل في المنطقة , حيث أشارت النصوص السومرية والأكادية إلى وجودهم في هذه المنطقة 0 وبناء على ذلك فقد تم تنفيذ مجموعة من الأبحاث الأثرية منذ الموسم الأول الذي بدأ في شهر أيار من عام 2007 0

ففي الموسم الأول تم إجراء مسح واسع للمنطقة التي تم تقسيمها إلى أربع مناطق احتوت على المدافن الحلقية 0

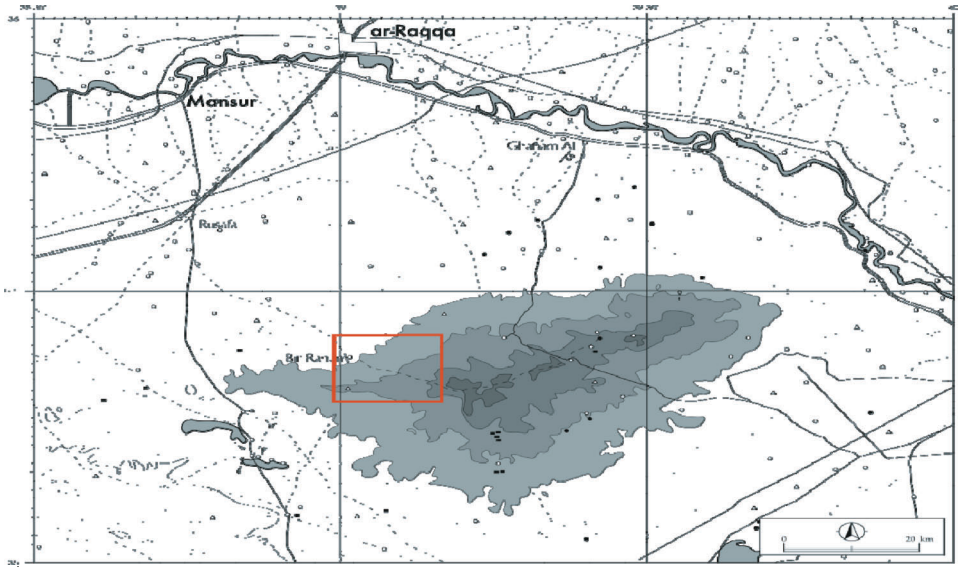
أما في الموسم الثاني فقد تم إجراء اسبار اختباريه لهذه المدافن الحلقية ضمن منطقة حداجة احد الناطق الأربعة الممسوحة في الموسم الأول ,فمن خلال أعمال السبر تم تأريخ هذه المدافن إلى الفترة الممتدة من نهاية عصر البرونز القديم وبداية عصر البرونز الوسيط 0

واشتملت أعمال الموسم الثالث على الاستمرار في إجراء الأسبار الأختبارية لهذه المدافن في منطقة حداجة1 ,إذ تم الكشف عن 9 من المدافن الحلقية في هذه المنطقة 0

استمرت أعمال السبر الاختباري لمنطقة حداجة في الموسم الرابع مع التركيز على دراسة 7 من المدافن الحلقية في تلك المنطقة 0 هذه الدراسات والأبحاث في المنطقة مكنت من إيضاح التسلسل الزمني للمدافن الحلقية العائدة إلى عصر البرونز0

وفي الموسم الخامس تركز البحث في منطقة باتجاه الجنوب والمسماة بمنطقة طول رحوم حيث تم إجراء اسبار لثمانية عشر مدفناً حلقياً 0

وتركزت أعمال الموسم السادس على إجراء إعادة إجراء مسوحات عامة للمنطقة , وكان الهدف من ذلك تصنيف وتوزيع أماكن انتشار المدافن الحلقية في منطقة البشري , مع التركيز بشكل رئيسي على الجزء الجنوبي من منطقة البحث , وخلال أعمال المسح هذا تم تسجيل حوالي 11 منطقة اشتملت على المدافن الحلقية في المنطقة :



خريطة عامة توضح منطقة البحث لهذا الفريق

المدافن الحلقية في وادي رحوم 1 : تمتد هذه المنطقة على شكل هضبة مستطيلة الشكل حوالي 1كم إلى الشمال من منطقة طول رحوم , حيث تم الكشف عن 35 مدفن حلقي انتشرت على طول الحافة الجنوبية لهذه المنطقة , اشتملت هذه المدافن على العديد من النماذج والأشكال والتي بلغ قطرها حوالي 10 م ومحاطة بأسوار متعددة من الأحجار الكلسية , وهي مشابهة للمدافن الحلقية الموجودة في منطقة حداجة1 0

المدافن الحلقية في وادي رحوم 2 : امتدت هذه المنطقة حوالي 800م إلى الشرق من مدافن وادي رحوم1 ,في هذه المنطقة تم الكشف عن 13 مدفن حلقي مختلفة الأشكال والأحجام , وكان المدفن الأكبر في هذه المنطقة بقطر 8م و ارتفاع بلغ 40سم ,حيث يحيط بهذا المدفن ثلاثة أسوار من الحجر الكلسي 0

المدافن الحلقية في وادي رحوم 3 : وتقع إلى الشرق من وادي رحوم 2 حيث ضمت هذه المنطقة ثمانية مدافن وكان أكبر هذه المدافن بقطر 9م وبارتفاع 70سم 0

المدافن الحلقية في وادي رحوم 4 : وهي على بعد 1كم إلى الشمال من مدافن وادي رحوم 2 حيث تم الكشف عن15 مدفن حلقي على امتداد 2كم بلغ قطر اكبر المدافن فيها 9م وارتفاعه 90سم , محاط بسور خارجي من الحجر الكلسي 0

المدافن الحلقية في وادي رحوم 5 : امتدت هذه المنطقة حوالي 800م إلى الشرق من مدافن وادي رحوم 4 , ضمن وادي كبير, حيث تضمن خمسة مدافن , كان أكبر هذه المدافن بقطر 8م وارتفاع بلغ 70سم 0

صورة تظهر احد المدافن الحلقية (Tumulus) في منطقة وادي رحوم5

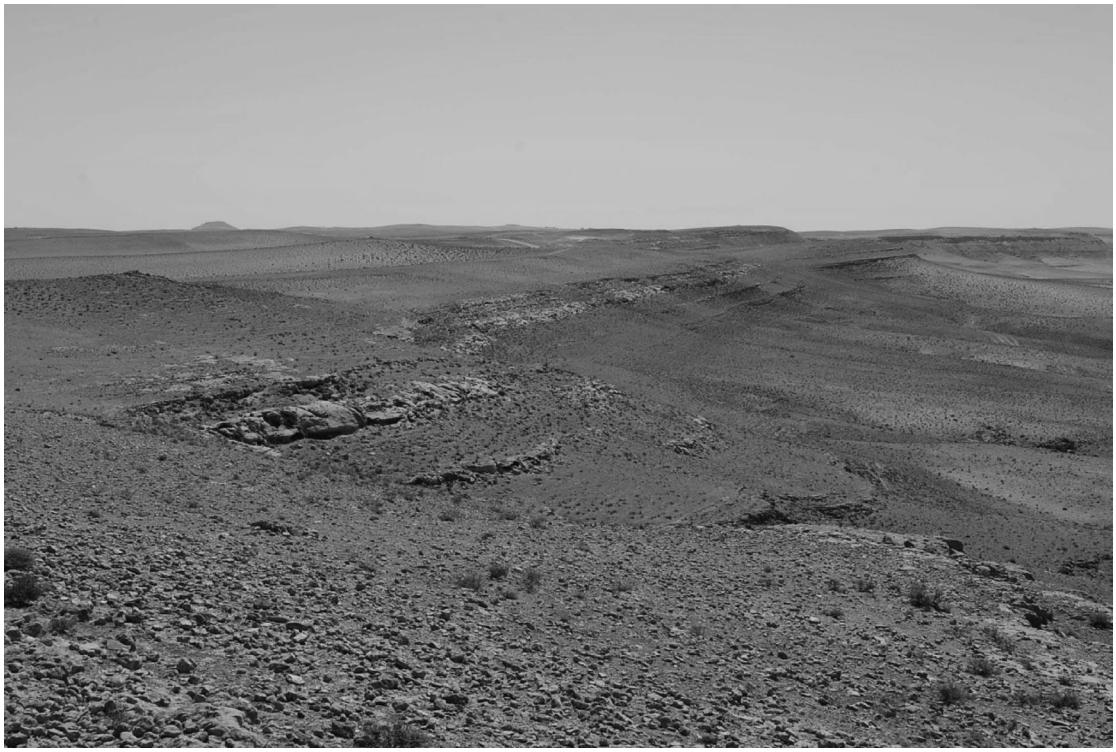
المدافن الحلقية في وادي رحوم 6 : امتدت هذه المدافن على طول 900م ضمن منطقة منحدرة حيث تم الكشف عن 14 مدفن حلقي متنوع الأحجام بين المتوسط والصغير , حيث كان اكبر هذه المدافن بقطر بلغ 6م وارتفاع 20سم , وهو مشابه لمدافن حداجة1

المدافن الحلقية في وادي رحوم 7 : وهو عبارة عن مدافن حلقية صغيرة ترتكز على قمة هضبة , تبعد حوالي 1كم إلى الشمال من مدافن وادي رحوم 6 , ضمت ثلاثة مدافن حلقية صغيرة الحجم 0

المدافن الحلقية في وادي رحوم 8 : امتدت على طول الحافة الشمالية من مدافن وادي رحوم7 , المدفن الأكبر من بين الخمسة مدافن المكتشفة في هذه المنطقة كان بقياس بقطر 8م وارتفاع بلغ 70سم , هذه المدافن أيضا محاطة بأسوار حجرية متعددة 0

المدافن الحلقية في وادي رحوم 9 : تتوضع ضمن منطقة منحدرة , حوالي 1كم شمال منطقة وادي رحوم5 , تم الكشف فيها عن خمسة مدافن حلقية محاطة بثلاثة أسوار خارجية من الحجر الكلسي 0

المدافن الحلقية في منطقة طول رحوم2 : تمتد هذه المدافن إلى الشرق من مدافن طول رحوم1 حوالي 3كم عن الحدود الإدارية من مدينة حمص , حيث تحتوي هذه المنطقة على 16 مدفن حلقي , وكانت هذه المدافن محاطة بسور واحد من الأحجار الكلسية , وهي مشابها في نمطها مدافن حداجة1 0



صورة عامة تبين امتداد المدافن الحلقية في منطقة طول رحوم2

المدافن الحلقية في منطقة طول رحوم3 : تركزت هذه المدافن فوق هضبة واسعة ضمت ثمانية مدافن حلقية , اشتملت على نماذج متعددة لهذه المدافن 0

وفي هذا الموسم أيضاً تم وضع خريطة شاملة لمنطقة رجوم حداجة التي احتوت على 16 مدفن حلقي (هذه المنطقة تمت دراستها خلال أعمال الموسم الأول) 0

خلاصة : إن أعمال المسح الأثري لهذه المناطق التي احتوت على المدافن الحلقية قد تركزت في الجهة الجنوبية من منطقة عمل هذه البعثة الأثرية المشتركة , وهذه المدافن تعود إلى عصر البرونز , حيث بلغ عدد المدافن الحلقية التي تمت دراستها في هذه المنطقة حوالي 210 مدفن ,

وقد أشارت الأبحاث والدراسات التمهيدية التي جرت في الجهة الشمالية من منطقة هذا البحث إلى وجود عدداً من المدافن الحلقية أيضاً والمعاصرة للمدافن الموجودة في هذه المنطقة , مما يدل على أن منطقة البحث بشكل عام قد احتوت على مئات من المدافن الحلقية التي تؤرخ إلى عصر البرونز , كل ذلك يشير إلى وجود مستوطنات لهؤلاء المجموعات البشرية التي تنقلت ضمن منطقة جبال البشري 0

وهناك العديد من الآراء التي تدعم وتؤيد فكرة أن القسم الشمالي الغربي من جبال البشري كان مركزاً لتجمع المجموعات الرعوية خلال عصر البرونز في شمال شرق سورية 0

أيضاً فقد قدمت مجموعة المكتشفات التي عثر عليها ضمن هذه المدافن الحلقية في منطقة حداجة1 ومنطقة طول رحوم2 العديد من الدلائل التي تؤرخ هذه المدافن ضمن منطقة جبال البشري إلى الفترة الممتدة من نهاية عصر البرونز القديم وحتى بداية عصر البرونز الوسيط

ARCHAEOLOGICAL RESEARCH IN THE BISHRI REGION — REPORT OF THE TENTH WORKING SEASON —

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September 10, 2009

The 10th season's Syria-Japan Archaeological Joint Mission to the Bishri Region started on August 1 and ended on September 9, 2009. Dr. Bassam Jamous, the Director General of the Syrian Directorate General of Antiquities and Musems, and Dr. Michel Al-Maqdissi, the Syrian Supervising Adviser for this joint mission and the Director of Archaeological Excavations and Research at the Syrian Directorate General of Antiquities and Musems, kindly helped us towards the realization of this tenth working season. We express our sincerest gratitude to them for their heart-warming cooperation.

The members of the joint mission of this season were as follows.
Japanese party: Katsuhiko Ohnuma (Director), Sumio Fujii, Kazuyoshi, Nagaya, Kae Suzuki, Kyohei Inoue, Mitsuo Hoshino, Takeshi Saito, Yusuke Katsurada, Yoshihiko Nakano, Hidemi Ishida and Kiyomi Mori.
Syrian party: Mohamad Sarhan (Director), Aed Issa, Ibrahim Khalil and Ahmed Sultan.

In this working season, we undertook series of research of which outlines are described below.

1. An Archaeological Survey and Sounding of Bronze Age Cairn Fields in the Northwestern Flank of Jabal Bishri

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Research objective and process

Our research project aims to specify archaeological footprints of Bronze Age pastoral nomads in the Bishri region and, in so doing, shed new light on the traditional issue of *Mar-tu*/*Amurru*, a large pastoral population that Sumerian and Akkadian cuneiform texts refer to as being based on the region. For this purpose, we conducted a series of archaeological investigations since the first field season in May of 2007. This season falls on the seventh campaign for our team.

The first field season was devoted to a preliminary survey of the research area. We located four cairn fields in a limestone hilly terrain to the east of the village of Bir Rahum (Fujii 2008). The

second field season, conducted in March of 2008, embarked on a comprehensive sounding of Wadi Hedaja 1, one of the four sites located in the first season (Fujii 2009). BC-10 was tested and tentatively dated, on the basis of a few diagnostic finds, to a period spanning from the end of the Early Bronze Age to the beginning of the Middle Bronze Age. The third field season, undertaken in November of the same year, continued the intensive investigation of Wadi Hedaja 1 and tested a total of nine cairns aligning along the southern edge of the site (WHD-1/BC-09~01) (Fujii et al. 2009a). The fourth season also focused on the Hedaja area and examined seven cairns at the neighboring three sites (WDH-1/BC-11~14, WHD-3/BC01~02, and WHD-4/BC-01) (Fujii et al. 2008b). The series of investigations enabled us to establish a techno-typological sequence of Bronze Age burial cairns in the Hedaja area. In order to test the Hedaja sequence in a broader context, the fifth season in May of 2009 moved to the site of Tor Rahum 1 and tested a total of eighteen cairns (Fujii et al. 2009b). The soundings verified the validity of the Hedaja sequence, although a few minor revisions were added. The sixth field season returned to a general survey and newly located, on the basis of more precise information accumulated in the course of the soundings, eleven cairn fields or a total of 126 ancient burial cairns in the southern half of the research area (Fujii et al. 2009). The seventh field season, our main concern, took place from August 1 through September 9, focusing on the following complementary operations to conclude our research project.

Soundings at Wadi Hayuz 1 and 2

Wadi Hayuz 1 and 2 are small-scale cairn fields lying ca. 10 km SSE of Bir Rahum (Fig. 1). We tested a total of six burial cairns: five at Wadi Hayuz 1 and one at Wadi Hayuz 2. As a result, the two sites turned out to fall within the time range from Phase 1 to Phase 2 of the Hedaja sequence. Of interest is BC-05 at Wadi Hayuz 1, which was constructed over an edge of a large rectangular platform packed with limestone rubble (Fig. 2). Although every cairn was entirely looted, snail and carnelian beads, pottery sherds, flint artifacts, and a few bronze products were found mingled with disturbed soil (Fig. 3). Human skeletal remains also occurred in small quantities.

Soundings at Wadi Hedaja 2 and 4

Wadi Hedaja 2 and 4 are located ca. 5 km east of Bir Rahum. We tested a total of nine cairns: eight at Wadi Hedaja 2 and one at Wadi Hedaja 4. The soundings showed that both cairn fields cover the time range from Phase 1 to Phase 2 or 3. Again, all of the cairns were heavily disturbed, but larger cairns produced a small number of artifacts such as pottery sherds, snail and stone beads, and flint artifacts. Of particular interest are a straight-necked small pot and a bronze toggle pin both found at BC-09 of Wadi Hedaja 2 (Fig. 4, 5). The co-occurrence of these diagnostic finds corroborated anew our perspective that the Bishri cairn fields belong to the Middle Bronze Age.

Additional Soundings at Wadi Jal al-Tyur 2

In order to collect further information on the Bishri cairn fields, we conducted an additional sounding of two large burial cairns at Wadi Jal al-Tur 2 lying ca. 8 km ENE of Bir Rahum. BC-01 consisted of a corridor-type cist and a double peripheral wall encompassing it, a combination characteristic of Phase 1 (Fig. 6). Though entirely looted, the burial chamber yielded four bronze rings, a few cowrie and carnelian beads, and a certain amount of human skeletal remains (Fig. 7). BC-02, on the other hand, was constructed over the southern edge of an oval platform compacted with limestone rubble (Fig. 8). This type of burial cairn is common in Phase 2. Finds were limited to a single bead made of an unidentified black stone and a few dozens human bone fragments.

Surveys in the Northern Half of the Research Area

The last two weeks of the research period were devoted to a general survey in the northern half

of the research area. Although its eastern part was left less scrutinized due to the difficulty in access and time constraints, the survey newly registered 17 cairn fields or a total of 131 ancient burial cairns (Fig. 9). It follows that the research area, as a whole, contains several hundreds burial cairns. The concentration of homogeneous burial cairns in the limited area is suggestive of the involvement of a large population who shared the same ethno-cultural identity.

Summary

Our research project in the Bishri Mountains temporarily ended with the seventh field season. The series of investigations since May of 2007 has enabled us to specify the archaeological footprints of ancient pastoral nomads hitherto poorly known in the region. It is now evident that the northwestern flank of Mt. Bishri was a funerary center of a large group of MB pastoral nomads. A series of diagnostic finds such as snail and carnelian beads, bronze products, and plain potteries is suggestive of their contact with the Sumerian and Akkadian cultural sphere in southern Mesopotamia, on one hand, and the urbano-rural communities in the Middle Euphrates River Basin, on the other hand. A large group of MB pastoral nomads who was based in the Bishri region and closely tied with the civilized societies to the north and the south – it seems that circumstantial evidence fulfill basal conditions to define them as a group of *Mar-tu/Amurru*. Nevertheless, our far-reaching research project has just started. Further investigation is needed to validate our challenging new perspective.

Reference

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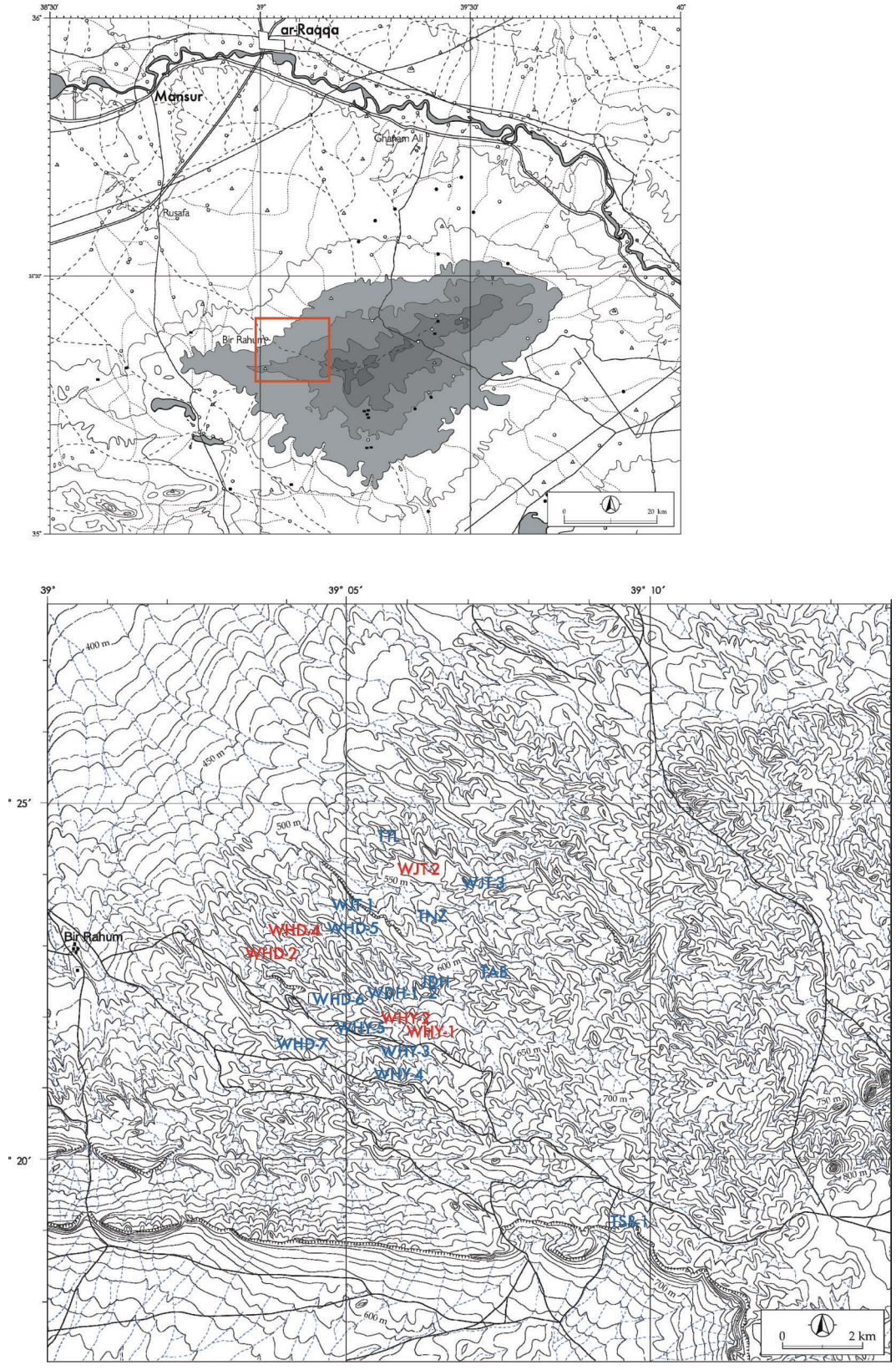


(WHD-4: Sounded; WHY-3: Surveyed)

Fig. 1 Research area (above) and cairn fields investigated in this season (below).

Fig. 2 Wadi Hayuz 1: General view of BC-05 (looking SE).

Fig. 3 Wadi Hayuz 1: Small finds from BC-01.

Fig. 4 Wadi Hedaja 2: General view of BC-09 (looking NE).

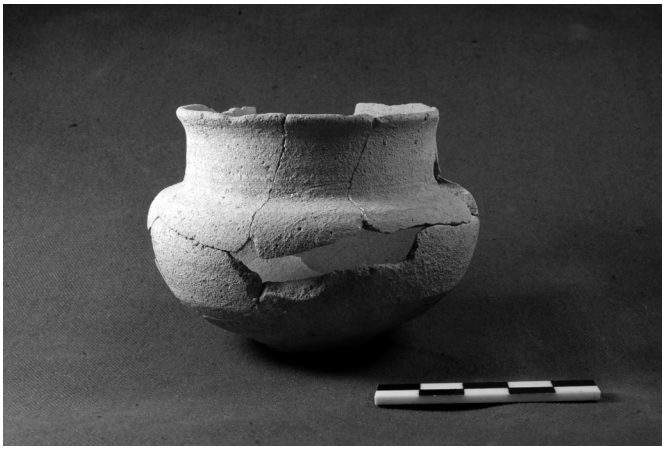


Fig. 5 Wadi Hedaja 2: Pottery from BC-09.

Fig. 6 Wadi Jal al-Tyur 2: BC-01 (looking NE).

Fig. 7 Wadi Jal al-Tyur 2: Small finds from BC-01.

Fig. 8 Wadi Jal al-Tyur 2: General view of BC-02 (looking NW).

Fig. 9 Wadi Jal al-Tyur 2: General view of BC-17~19 (looking N).

2. All-Core Boring Survey in the River-Terrace Deposit

Mitsuo HOSHINO (Professor Emeritus, Nagoya University)
Takeshi SAITO (Associate Professor, Meijo University)
Yusuke KATSURADA (Research Fellow, Nagoya University)

An assemblage of pollen fossils found in certain sediment layer is archaeologically very important to know the vegetation prevailed at the time. Our geological team hitherto collected a lot of sediment samples from various horizons of natural and artificial cross-sections of river terrace deposits along the middle Euphrates. Unfortunately, the collected samples included the pollen fossil only scarcely. This may be due to the dry condition under which the samples have been exposed for a long time.

Description of the boring sites

In this working season, we performed all-core boring in order to get the sediment samples suitable for pollen analyses. We selected two localities for boring site, both of which are wetland (old oxbow lake) at the north of Zor Shammar as shown in Fig. 1. Oxbow lakes were ever part of mainstream of Euphrates. Such lake sediments are basically sand and/or gravel at the bottom and mud in large part of upper horizon. Sand and gravel were fluvial deposits at the mainstream stage and the mud, on the other hand, was deposited at the isolated lake stage under relatively static sedimentary conditions. If the vegetation was plenty there some time ago, many kinds of pollen have dropped into the lake and have precipitated with muddy particles. We expect that many kinds of pollen could be preserved in the muddy sediments collected in this time.

Methodology of all-core boring

All-core boring is a technique to get non-disturbed sediments for scientific purposes such as microfossil studies and observation of sedimentary structures. Only limited numbers of boring company have this technique. Fortunately Ms. Yamazaki living in Aleppo recommended “Aleppo Geotechnical Center” to us, which is one of excellent boring companies in northern Syria.

According to the document of the company, the methodology of all-core boring is as follows;

1. Minimum amount of flesh water circulation will be used during boring process.
2. Continuous cores of all kinds of strata will be recovered and special drilling pits, short drilling runs with reasonable diameter of samplers (127 mm to 76 mm) will be used to ensure high recovery

(not less than 95 %). This will depend upon the quality of the encountered soil/rock formation, the existence of cavities, caverns or very weakly cemented rock formations …

3. Casing will be installed inside the bore hole especially at the upper layers (if necessary) to prevent the collapse of its sides.
4. Single, double, Shelby and/or wire line core barrels will be used during drilling according to the site conditions.
5. All extruded samples will be placed in sequence within standard wood boxes.

Locality RQ-1

Drilling started at 6:40 a.m. 6th August, 2009. A boring scene is shown in Fig. 2. From the ground surface to –7.7 m, brownish coloured mud predominates (Fig. 3). In some places white spots of gypsum are crystallized. At the depth of –7.7 m, the mud changed its colour to greyish which indicates reduced environmental condition. At –10.4 m, the boring tip reached gravel bed which indicates the bottom fluvial sediments. The water table level was found to be between –1 m to –1.5 m. Cores were carefully wrapped with kitchen cellophane as shown in Fig. 4.

Locality RQ-2

From the ground surface to –3.0 m, brownish coloured mud predominates and at –3.0 m the colour changed to greyish. At –4.0 m the tip reached fluvial sand and at –5.9 m to the gravel. The water table level was between –1 m to –1.5 m.

Fig. 1 Two localities of boring site, RQ-1 and RQ-2 are shown in the Google Map.

Fig. 2 The boring machine (centre) and the water tank (left) at the locality RQ-1.

Fig. 3 Extruded boring cores, 1 metre in length and 127 mm in diameter, were placed into the wooden container.

Fig. 4 Each core was carefully wrapped to prevent from drying and contamination.

Fig. 5 The core was cut in half, and then offered to make description and analyses.

3. A Morphological Study of the Human Remains from Bishri Mountains

Yoshihiko NAKANO (Associate Professor, Osaka University)

I had the morphological study of the human remains from Bishri area succeed to 2008. In this season, the archeological survey of the site TRH-1, WS-1 and TGA yielded many human skeletal specimens. They included some human skulls that were not complete. The specimens were composed of human remains and animal bones including small rodents, hares, bards and some cattle. There were fragmental jaws, isolated teeth, limb bones, phalanges and skull fragments in the human remains. Almost of the bones were fragments, and the bones from one burial cairn were not always belong to one individuals. Therefore, the one purpose of the study was identification of the bones with the observation and measurements. The other purpose was to decide specimens for carbon 14 dating

method. The selected specimens were sent to Japan for the analysis with the permission.

Descriptions

The skeletal specimens were collected by the excavated points in each cairns in TRH-1. The useful human bones for the morphological studies were found in Burial Cairn No. 117, 118, 123, 126, 127, 130, 131 and 133.

1. Burial Cairn No. 117 (TRH-1/BC-117)

Many bones were excavated from BC-117 including lower jaw (Fig. 1) and sacrum (Fig. 2). Some bones had the feature of young individuals as the separated epiphysis while other bones showed the aged one. The sacrum curved over normal one. It should be the deformation by aging.

2. Burial Cairn No. 118 (TRH-1/BC-118)

The specimens composed of some skull fragments and many postcranial bones. The skull fragments had less information. Postcranial bones were including limb bones, vertebrates, and hip bones. There were two left proximal femur and one was from young individual and another from old. Other bones are divided two types, young and old. However there was the possibility that the bones were from more than three individuals.

3. Burial Cairn No. 123 (TRH-1/BC-123)

The skeletal specimens were not so many from BC-123. However they included the bones from two or more individuals. There were two lower jaws (Fig. 3, 4). One had the two teeth. The wear of the enamel showed the individual was young adult. Another jaw had no teeth.

4. Burial Cairn No. 126 (TRH-1/BC-126)

Many postcranial bones and some fragmental skull were found. Almost of the limb bones had not the epiphysis. The specimens were from teenager.

5. Burial Cairn No. 127 (TRH-1/BC-127)

One skull without face was excavated. The specimen was collected with matrix and it was so fragile. Therefore, it was so difficult to have the observation for the details. There was no enough time to clean the specimen and analysis. The suture line was not fused. He might be teenager.

6. Burial Cairn No. 130 (TRH-1/BC-130)

There two skulls were found from BC-130. One skull had the almost complete braincase without face. The inside of the brain case was filled with matrix (Fig. 5). The frontal and parietal bones remained. The lower parts of the temporal and occipital bones were lacked. The foramen magnum was missing. The suture line was clear and the closure was not strong. It showed the young age. The bulge of the frontal bone was not so large. The feature might show that it was young female.

Another skull had only skull cap (Fig. 6). The suture line was disappeared in the dorsal part and the individual were not so young.

Many postcranial bones were also excavated. The total number of the fragments was more than 100. They composed of at least three individuals because same part of the bone was found as left proximal femur.

7. Burial Cairn No. 131 (TRH-1/BC-131)

Almost of the remains were animal bones. They were only two human bones, left metatarsal (II) and right metacarpal. There were no outstanding features and hyper ossification in the bones.

8. Burial Cairn No. 133 (TRH-1/BC-133)

Many human bones were excavated. The parts of the skeleton were skull and jaw fragments (Fig. 7), and postcranials including axis. Two teeth (upper C and Upper I2 were also found, but it was difficult to know the details for the lack of the enamel. These bones might belong to one individual. The development of the each tuberosity of the bone was not remarkable. The morphological condition showed that the body was not so old.

9. WS-1

The large size limb bones were excavated from WS-1 site. All of the bone should be from one individual. The condition of the preservation was not suitable in the soil. Many bones were fragile. I selected some tough fragments for dating sample. The individual might be tall and strong male.

10. TGA

There were two groups of specimens from TGA site. One group was the bones of baby. All of the specimens were fragments. It was difficult to gain the more information. Another group was found from sq.6 including limb bones. The bones had no epiphysis. Therefore, the specimens were from young people and the sex was unknown.

Discussions and conclusions

In this season, the field survey had the fruitful result for the human remains by the archeological research. Some cairns saved the many bones more from several individuals. They were including the bines from the young, middle age and aged person. They may also include both sexes.

In the results from the analysis in 2008, there was the tendency that the development of muscles was quite different between the upper limbs and lower limbs, namely, the muscles in the lower limbs were well-developed but the one in the upper limbs showed normal without grip muscles. This feature was confirmed in the bones of TRH-1. They showed that the walking occupied the high percentage of the life.

It was a pity that there was not enough time for the analysis. The results were preliminary. I expect for the next opportunity for the study in future.

The collecting of the samples for carbon 14 dating method was performed.

The number of samples became large because there were few complete bone and several individuals might be collected from same cairn. I could send the samples to Japan for the dating with the kind help of Syrian government and the staff.

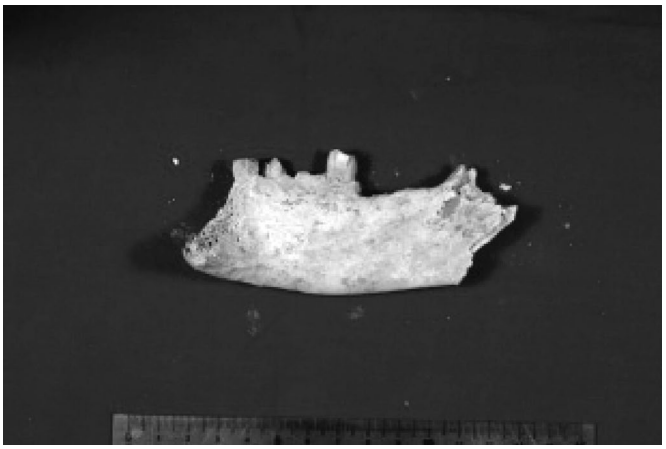


Fig. 1 Right lower jaw from TRH-1/BC-117.

Fig. 2 Sacrum from TRH-1/BC-117.

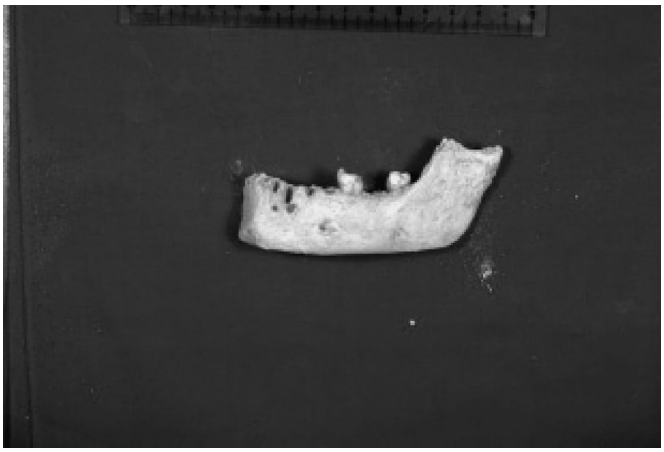


Fig. 3 Left lower jaw from TRH-1/BC-123.

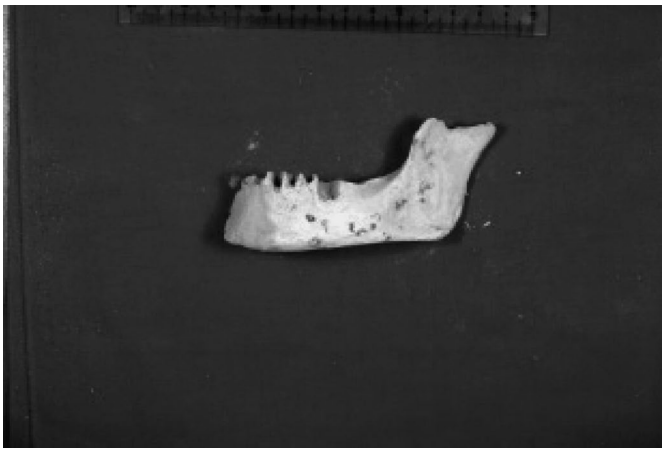


Fig. 4 Left lower jaw from TRH-1/BC-123.

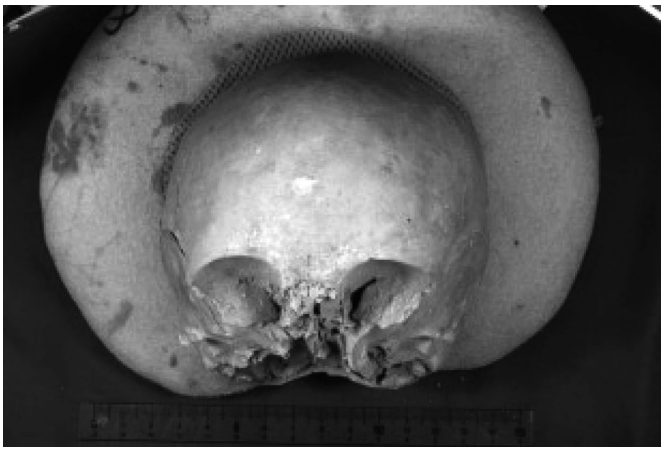


Fig. 5 Skull from TRH-1/BC-130.

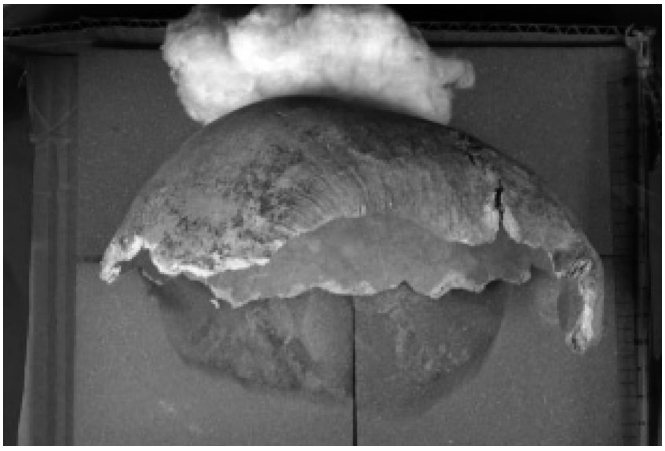


Fig. 6 Skull cap from TRH-1/BC-117.

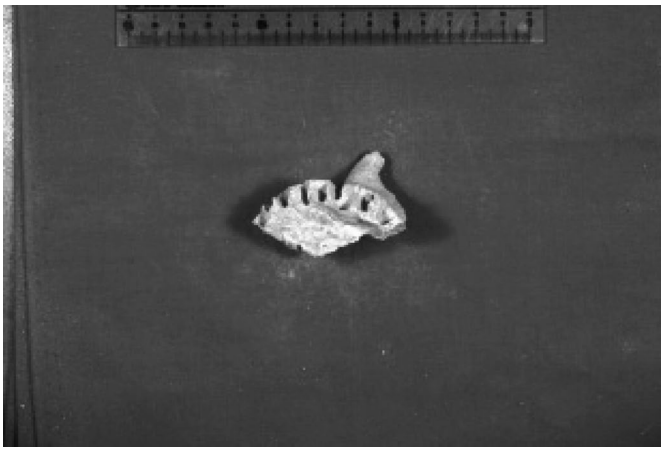


Fig. 7 Left upper jaw from TRH-1/BC-133.

4. Sondage in Square 6 of the Site of Tell Ghanem Al-Ali

Katsuhiko OHNUMA (Professor, Kokushikan University)

In this working season, sondage was carried out in Square 6 of Tell Ghanem Al-Ali (Fig. 1). In the 9th working season in May this year, we started sondage in this square to obtain information concerning the duration of the site exploitation in the Bronze Age and its intra-site functional variability. As the result of this sondage, a pit grave was unearthed with human bones and 7 pieces of pottery, which are dated to the Middle Bronze Age on the basis of pottery typology (Fig. 2).

Layers under the pit grave were not excavated in the 9th working season, and the archaeological sequence of this square was confirmed only within the limit from the surface soil down to the base of the pit grave as below.

Layer 1: Surface soil, sloping downwards into north direction in the thickness of 10 to 15 cm.

Layer 2: Pit grave which was made by the Middle Bronze Age people with cutting downwards into Layers 3. This pit was not shaped circle in outline but was shaped irregular meandering circle, suggesting that it had not been made systematically.

Layer 3: Brownish or yellowish hardened soil, 20 cm in accumulation at the thickest part, which was partly cut down at the time of the pit grave making. This layer bore sporadic and discontinuous lines of ash and potsherds of the Early Bronze Age Phase IVa.

In the view that further knowledge of the archaeological sequence below the pit grave in Square 6 is indispensable to understand details of the site exploitation at Tell Ghanem Al-Ali in the Bronze Age and to tell its intra-site functional variability, we carried out continued sondage in this square in this working season.

As the result, we revealed the archaeological sequence beneath the pit grave as follows, though far from having reached the “virgin soil”.

Thin layers of hardened soil of various colours (Layer 3): Horizontal thin layers, some 20 cm in thickness in total, altogether forming Layer 3. These thin layers were neither very hardened nor bearing continuous ash.

Floor with *gyus* plaster: The bottom of Layer 3, some 10 cm down from the bottom of the pit grave, was a floor with *gyus* plaster and rather continuous ash (Fig. 3). This floor had been made by the inhabitant at the site of the Early Bronze Age Phase IVa, with cutting and leveling of a mud brick wall supposedly having more or less exsited at the time of the floor malking. The floor is very hardened, and the lines of the mud brick wall run in northwest to southeast and eastnorth to westsouth directions.

Building Level 1: Under the floor with *gyus* plaster and ash described above, a layer with potsherds and flakes/chips of lithic artifacts also of Early Bronze Age Phase IVa was unearthed in the thickness of some 10 cm. This layer can be defined as Building Level 1 in Square 6, for it is associated with the mud brick wall described above and a floor. This floor had been made with cutting and leveling of a lower wall and is very hardened. It bears *gyus* plaster and rather continuous ash (Fig. 4). The wall of Building Level 1 and the lower wall are different in their directions, that is, northwest to southeast and eastnorth to westsouth directions for the former, and north to south and east to west directions for the latter.

The sondage works carried out so far in Squares 1 to 6 at Tell Ghanem Al-Ali and surveys on the tell surface have demonstrated that the Early Bronze Age building complexes at Tell Ghanem Al-Ali may have been associated with walls of at least two different directions, that is, north to south and east to west directions on the one hand, and northwest to southeast and eastnorth to westsouth

directions on the other.

As already described, two walls unearthed in Square 6 in this working season run in two different directions. The upper wall associated with Building Level 1 runs in northwest to southeast and eastnorth to westsouth directions, while the lower wall runs in north to south and east to west directions.

This is to provide a good material, after detailed study of the directions of walls at Tell Ghanem Al-Ali on the whole, to correlate Building Level 1 of Square 6 with levels of other squares at Tell Ghanem Al-Ali.

Through series of integrated research we have undertaken in the past three years in the region covering Tell Ghanem Al-Ali, Wadi Shabout and Bishri Desert plateau, we are now reaching a supposition that the site of Tell Ghanem Al-Ali was at its height in the Early Bronze Age and became diminished in later period in the Middle Bronze Age, with sporadic small-scaled houses and simple pit graves alone on it.

This supposition seems to be supported by the archaeological sequence in Square 6 at Tell Ghanem Al-Ali, in which we may see how Middle Bronze Age people made simple pit graves there, digging down into the ruins of Early Bronze Age buildings (Fig. 5).

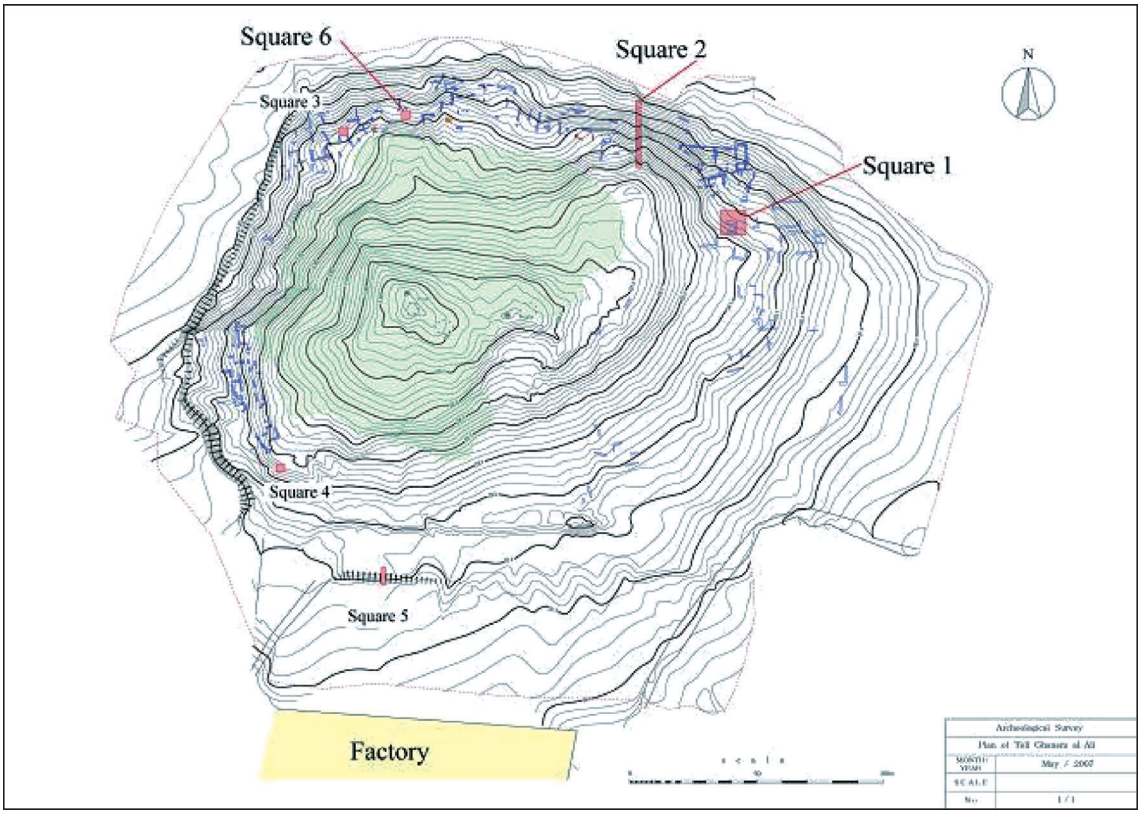


Fig. 1 Overall plan of Tell Ghanem Al-Ali showing the location of Square 6.

Fig. 2 Pit-grave unearthed from Square 6 in the 9th working season, seen from north.

Fig. 3 Floor with *gyus* plaster and lines of the mud brick wall levelled for the floor making, seen from north.

Fig. 4 Wall and floor of Building Level 1 seen from north. Note the lines of the lower wall running in different directions from the lines of the wall of Building Level 1.

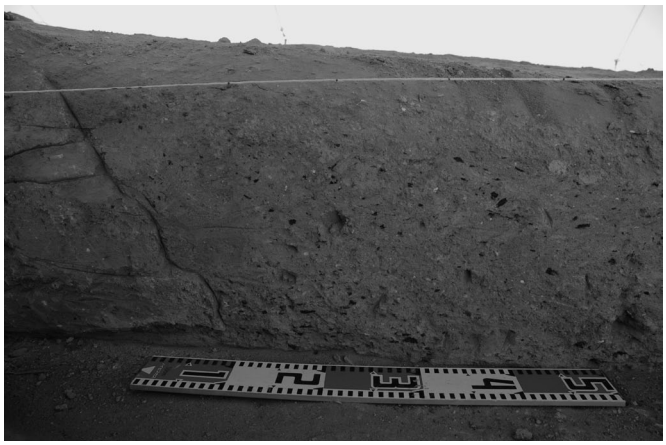


Fig. 5 Pit seen at the northwest corner of Square 6. This pit was most probably associated with another Middle Bronze Age pit-grave.

5. Sondage in Square 101 of the Site of Tell Ghanem Al-Ali

Ibrahim KHALIL (Department of Antiquities and Museums, Raqqa)
Ahmed SULTAN (Department of Antiquities and Museums, Raqqa)

Sondage was conducted from 8 to 20 of August at the south-eastern spot of Tell Ghanem Al-Ali. We named this spot Square 101 (Fig. 1). In the 9th working season, we considered this spot to be unique with concentrated cobles of gypsum rock (Fig. 2), considering it to have been a probable grave.

As the result of the sondage in this working season, we unearthed a complete miniature pottery, an almost complete pottery (Fig. 3), a spindle wheel, and rather many flakes and chips of the Bronze Age lithic artifacts from the accrmulation under the pavement-like cobbles allocation. The function of this unique cobbles allocation within the site of Tell Ghanem Al-Ali is now under study.

Fig. 1 South-eastern spot of Tell Ghanem Al-Ali with cobbles allocation.

Fig. 2 Square 101 with cobbles allocation.

Fig. 3 Pottery unearthed from accumulation under cobbles allocation.

الموسم العاشر من أعمال البعثة الأثرية السورية اليابانية المشتركة في منطقة البشري

بدأت أعمال هذا الموسم في الأول من آب وانتهت في التاسع من أيلول لعام 2009م 0

يدير البعثة من الجانب السوري أحمد سلطان ومن الجانب الياباني كاتسوهيكو اونوما

شكر خاص للدكتور بسام جاموس المدير العام للآثار والمتاحف في سورية والدكتور ميشيل مقدسي مدير التنقيب والبحث الأثري في المديرية العامة للآثار والمتاحف والمشرف المستشار لهذا البحث الأثري , لما قدموه من دعم ومساندة في سبيل إنجاح هذا الموسم من البحث 0

فقد تم تنفيذ سلسلة من الأبحاث الأثرية والجيولوجية المتنوعة في هذا الموسم والتي سنقدم شرح عن هذه الأعمال وفق ما يلي :

أولاً : <u>استكمال أعمال السبر الاختباري في المربع رقم6 في تل غانم العلي :</u>

(كاتسوهيكو اونوما , بروفيسور جامعة كوكوشيكان)

يقع هذا المربع عند الزاوية الشمالية الغربية من تل غانم العلي , والذي تم فتح السبر فيه الموسم الماضي وتهدف أعمال السبر في هذه المنطقة من التل إلى التعرف على فترة الاستيطان لعصر البرونز في التل 0

وكنتيجة لأعمال الموسم الماضي فقد تم الكشف عن حفرة لقبر داخل المربع تحتوي على العظام الإنسانية بالإضافة إلى سبعة أواني فخارية والتي تم تأريخها إلى عصر البرونز الوسيط 0 وقد توقف التنقيب في هذا المربع عند سوية القبر , دون البحث في سويات أقدم 0 حيث اشتملت السويات الأولى من الحفرية على :

السوية الأولى : والتي احتوت تربة سطح التل وكانت هذه السوية منحدرة باتجاه الشمال بسماكة تراوحت بين10-15سم

السوية الثانية : احتوت هذه السوية على حفرة القبر التي تم حفرها خلال عصر البرونز الوسيط وقد امتدت هذه الحفرة حتى السوية الثالثة شكل هذه الحفرة لم يكن منتظم ويبدو أنه مبني بطريقة عشوائية 0

السوية الثالثة : والتي احتوت على تربة بنية مائلة إلى الصفار بسماكة 20سم , تخللها خطوط متقطعة من الرماد مع بعض الكسر الفخارية التي تعود إلى عصر البرونز القديم 0

إن دراسة الطبقات الأثرية الموجودة أسفل حفرة الدفن تساعد على فهم فترة استيطان تل غانم العلي خلال عصر البرونز , ففي هذا الموسم تم استكمال أعمال السبر في أسفل هذه الحفرة

حيث تم الكشف عن السوية الأثرية الأقدم تحت حفرة القبر بهدف الوصول إلى تربة التل الأصلية هذه الطبقة التي تحتوي على تربة قاسية متعددة الألوان 0

تم الكشف عن طبقة سميكة من التربة الصلبة مختلفة الألوان بسماكة20سم يتخللها خطوط من الرماد , كشف أسفل هذه الطبقة عن أرضية من الجص بسماكة10سم مشكلة بواسطة سكان عصر البرونز القديم في التل , يتخللها جدار من اللبن باتجاه جنوب شرق و شرق شمال نحو جنوب غرب 0 أسفل هذه الأرضية وجد طبقة تحتوي على كسر فخارية تعود إلى عصر البرونز القديم بسماكة10سم 0 حيث أظهرت هذه السوية ملامح أول الأبنية في هذا المربع من التل , تم الكشف عن جدار آخر من اللبن متوضع أسفل الجدار الأول ولكن باتجاهات مختلفة حيث يكون باتجاه شرقي جنوبي وشمالي شرقي نحو جنوب غرب 0

لقد دلت المسوحات الأثرية المنفذة على سطح تل غانم العلي و أعمال السبر الاختباري المنفذة في المربع1 والمربع2 والمربع6 , على وجود ترابط بين تركيب الأبنية العائدة لعصر البرونز القديم وهذه الجدران التي لها اتجاهات مختلفة

وكما ذُكر سابقاً , فقد تم الكشف عن جدارين من اللبن متوضعين فوق بعض ولكن باتجاهات مختلفة , حيث ينتمي الجدار العلوي الذي كان باتجاه شمالي غربي نحو الجنوب الشرقي وشرق شمال نحو الغرب الجنوب إلى مباني السوية الأولى من تل غانم العلي , بينما يمتد الجدار الأدنى باتجاه شمالي جنوبي وشرقي غربي 0

وبذلك تكون هذه الجدران قد قدمت تفاصيل جديدة في دراسة سويات الأبنية ضمن المربع 6 في تل غانم العلي ومقارنتها وربطها بسويات المربعات الأخرى في التل 0

فمن خلال البحث والدراسة التي نفذت في هذه منطقة البحث التي امتدت من تل غانم العلي والمنطقة المجاورة له باتجاه الجنوب نحو منطقة جبال البشري والتي بدأت منذ ثلاث سنوات يمكن الافتراض بأن تل غانم العلي كان خلال عصر البرونز القديم على ارتفاع اكبر ومن ثم انخفض ارتفاعه في عصور لاحقة خلال عصر البرونز الوسيط الذي يظهر سكن متقطع خلال هذه الفترة في تل غانم العلي 0

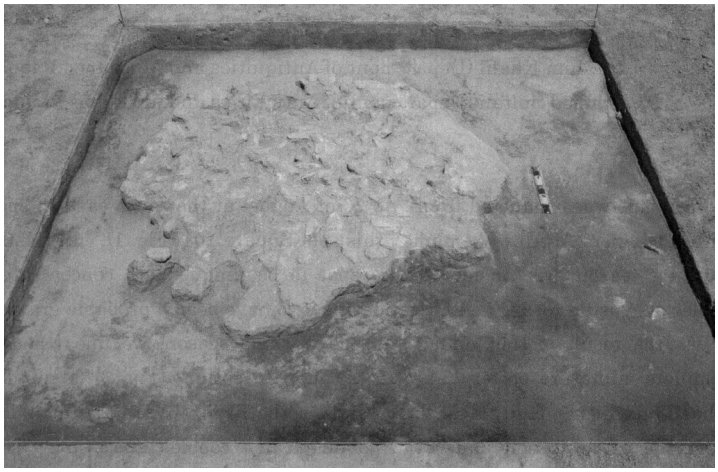
ويمكن دعم هذه الفرضية من خلال السويات الأثرية الموجودة في المربع6 من تل غانم العلي , والتي تبين كيف ساهم مجتمعات عصر البرونز القديم في تشكيل مقابر لهم من خلال حفر صغيرة فوق بقايا الأبنية العائدة لعصر البرونز القديم 0

ثانياً : إجراء سبر اختباري في المربع 101 في تل غانم العلي :

(احمد سلطان , المديرية العامة للآثار والمتاحف 0 إبراهيم الخليل, المديرية العامة للآثار والمتاحف)

يقع هذا المربع عند المنحدر الجنوبي الشرقي من تل غانم العلي ,فخلال أعمال المسح الأثري لتل غانم العلي في الموسم السابق لوحظ وجود مجموعة متراكمة من الحجر الكلسي على شكل دائري محيط قطرها حوالي 2م , حيث كان من المعتقد تشكل قبر تحتها 0

تم الحفر إلى عمق وصل إلى 40سم تقريبا لم يتم الكشف فيها عن أية سوية معمارية , إذ تم الكشف ضمن هذه الحفرية عن جرة فخارية بحالة جيدة تعود إلى عصر البرونز القديم, بالإضافة إلى دولاب لنموذج عجلة فخارية , أيضاً كمية كبيرة من الكسر الفخارية التي ما تزال قيد الدراسة والتوثيق 0



ثالثاً : مسح أثري للمدافن الحلقية (Tumuli) ضمن جبل البشري :

(سوميو فوجي , بروفيسور جامعة واسيدة 0 تاكورا اداتشي ,مركز الشرق الأوسط طوكيو 0 كازويوشي ناغايا طالب جامعة واسيدة 0 كي سوزوكي طالبة جامعة واسيدة كيوشي إنو طالب)

كما ذكرنا في المواسم السابقة حيث يعتبر هذا البحث كجزء من أعمال البعثة السورية اليابانية المشتركة في منطقة البشري , الذي يهدف إلى الكشف عن السويات الأثرية للمدافن الحلقية العائدة للقبائل البدوية المتنقلة(الأمورية) في جبل البشري مع إلقاء الضوء على طريقة ظهور هذه القبائل في المنطقة التي أشارت النصوص السومرية والأكادية إلى وجودهم في هذه المنطقة 0 وبناء على ذلك فقد تم تنفيذ مجموعة من الأبحاث الأثرية منذ الموسم الأول الذي بدأ في شهر أيار من عام 2007 0

فبعد إجراء مجموعة من المسوحات الأثرية للمنطقة بشكل عام مع التركيز على أعمال السبر الاختباري لبعض المدافن الحلقية المنتشرة في المنطقة بشكل عام ومنطقة حداجة وطول رحوم بشكل خاص , هذا الموسم استمرت أعمال السبر لهذه المدافن الحلقية ولكن في منطقة وادي حيوز1و2 , ووادي حداجة2و4 , ووادي جل الطيور2 , بالإضافة إلى إجراء مسح أثري للجزء الشمالي من منطقة البحث 0

اسبار في مدافن وادي حيوز1و2 : تنتشر مجموعة من المدافن الحلقية الصغيرة الحجم في منطقة حيوز التي تبعد 10كم جنوب وجنوب غربي منطقة بير رحوم , حيث تم دراسة خمسة مدافن حلقية في وادي حيوز1 ومدفن واحد في منطقة وادي حيوز2 , ومن خلال دراسة طبيعة هذه المدافن تبين أنها تتبع لنفس السويات الأثرية في مدافن الحلقية في منطقة حداجة1و2 0

ففي المدفن BC-05 في منطقة حيوز1 الذي كان مشيد فوق هضبة مستديرة يحيط فيه مجموعة من الأحجار الكلسية . معظم هذه المدافن كانت متعرضة للنهب والسرقة , تم العثور بداخلها على الخرز والكسر الفخارية وبعض الكسر البرونزية الصغيرة بالإضافة إلى كسر من العظام الإنسانية0

اسبار في مدافن وادي حداجة2و4 : تبعد مدافن وادي حداجة حوالي 5 كم شرق منطقة بير رحوم , حيث تم إجراء الأسبار لتسعة مدافن حلقية في هذه المنطقة , ثمانية منها في وادي حداجة 2 , ومدفن واحد في وادي حداجة 4 , فقد تم العثور في أكبر هذه المدافن على عدد من الكسر الفخارية والخرز المتعدد الأشكال بالإضافة إلى مسمار برونزي , وقد أثبتت هذه المكتشفات بأن المدافن الحلقية في منطقة جبل البشري تنتمي إلى عصر البروز الوسيط 0

اسبار في مدافن وادي جل الطيور2 : وبهدف الكشف عن معلومات أوسع عن المدافن الحلقية في منطقة البشري بشكل عام فقد تم توسيع البحث باتجاه منطقة جل الطيور2 التي تبعد حوالي 8كم شرقي وشمالي شرقي منطقة بير رحوم , حيث تم سبر مجموعة من الدافن الحلقية المنتشرة , ففي المدفن BC-01 الذي تألف من سورين خارجيين من الحجارة الكلسية تم الكشف ضمن حجرة الدفن على أربعة حلقات برونزية والخرز وعدد من بقايا العظمية أيضاً .

وفي المدفن BC-02 الذي كان مشيد فوق هضبة مرتفعة تحيط فيه مجموعة من الحجارة الكلسية أيضا تم الكشف ضمنه على خرزة مصنوعة من الحجر الأسود بالإضافة إلى عدد كبير من الكسر العظمية الإنسانية 0

صورة شاملة لمنطقة البحث

مسح أثري للجزء الشمالي من منطقة البحث : فقد تركز عمل الفريق خلال الأسبوعين الأخيرين من هذا الموسم على مسح الجزء الشمالي من منطقة البحث , إذ تم تسجيل حاولي 17 منطقة تحتوي على المدافن الحلقية , حيث بلغ عدد المدافن المنتشرة في هذه المناطق حوالي 131 مدفن حلقي , وكلها تندرج تحت نطاق منطقة البحث

خلاصة : مع نهاية أعمال هذه الموسم يكون عدد المناطق التي احتوت المدافن الحلقية سبعة مناطق حيث تم تسجيلها ودراستها وإجراء الاسبار فيها , وقد ساهمت في تقديم معلومات واسعة عن المجتمعات الرعوية المتنقلة ضمن هذه المنطقة خلال عصر البروز , حيث أنه وحتى الآن لا يوجد دليل واضح وقطعي بأن الجهة الشمالية الشرقية من جبل البشري كانت مركز انطلاق المجتمعات الرعوية المتنقلة خلال عصر البرونز الوسيط 0 فخلال أعمال السبر تم الكشف على مجموعة من المنتجات البرونزية والخرز المتعدد الأنواع بالإضافة إلى الكثير من العينات الفخارية والتي دلت على وجود صله لهذه المجتمعات بالثقافة السومرية والأكادية في شمال بلاد الرافدين من جهة , ومع المجتمعات الريفية المستقرة على حوض الفرات الأوسط من جهة أخرى .

إذاً هناك ارتباط لمجتمعات البرونز الوسيط المتنقلة في منطقة البشري مع المجتمعات المتحضرة التي استقرت إلى الشمال والجنوب منها 0 ومما لا شك بأن الدليل المباشر للتأكد من أن هذه المجتمعات هي جزء من القبائل الأمورية يحتاج إلى التوسع اكبر في عملية البحث ضمن هذه المنطقة بشكل عام 0

رابعا : استخراج عينات ترابية من المصاطب القديمة لنهر الفرات :

(ميتسو هوشينو ,جامعة ناغويا 0 تاكيشي سابيتو جامعة ميجو 0يوشي كاتسورادا جامعة ناغويا)

قام الفريق الجيولوجي بجمع الكثير من العينات الترابية للطبقات الموجودة ضمن المصاطب القديمة لحوض الفرات الأوسط وذلك بهدف التعرف على طبيعة التكوين الجيولوجي لهذه المنطقة منذ زمن قديم 0

ففي هذا الموسم تم اختيار منطقتين بجانب سرير النهر لاستخراج عينات ترابية منها بواسطة استخدام جهاز سبر (boring machine) , حيث يقوم هذا الجهاز باستخراج عينات ترابية على عمق أكثر من 10 م تقريبا 0

ففي المنطقة الأولى تم استخراج عينات طينية من عمق وصل إلى 7.7م , حيث كان لون الطين بنياً عند سطح الأرض , بينما تغير لون الطين إلى الخضار عند أعمق نقطة . كما لوحظ وجود بعض الترسبات الكلسية على أعماق مختلفة , أيضا لوحظت سوية مياه النهر ممتدة على عمق بين1 – 1.5م 0

أما في المنطقة الثانية وعلى عمق30سم من سطح الأرض فقد كان الطين ذو لون بني , بعدها تغير اللون إلى الخضار , وعلى عمق 40سم عثر على رمل نهري , وعلى عمق 5.9م عثر على رواسب حصوية , سوية سرير النهر كانت على عمق 1-1.5م –

هذه العينات المستخرجة تتم حاليا تحليلها ودراستها في مخابر خاصة بجامعة ناغويا بهدف التوصل إلى معلومات اكبر عن طبيعة تكوين تربة حوض الفرات الأوسط 0

خامسا : دراسة مورفولوجية للعظام الإنسانية ضمن منطقة البشري :

شملت هذه الدراسة مجموعة الهياكل العظمية المستخرجة من المدافن الحلقية المنتشرة في منطقة طول رحوم , حيث وُجدت أهم الهياكل العظمية المساعدة لهذه الدراسة في المدافن 117 – 118 – 123 – 126 – 127 – 130 – 131 – 133 0

حيث قدمت هذه الدراسة مجموعة من النتائج الهامة التي ساعدت في الدراسات والأبحاث الأثرية في هذه المنطقة 0 فقد احتفظت هذه المدافن الحلقية بالعديد من العظام التي تعود لأشخاص ذو عمر متوسط وأيضاً أشخاص كبار السن من الجنسين الذكر والأنثى.

فمن خلال نتائج تحليل العينات العظمية في موسم 2008 تبين أن نمو العضلة مختلف تماما بين المفاصل العليا وبين المفاصل السفلى التي كان نمو العضلة فيها بشكل أفضل من العليا مما يدل على مشي متواصل لهذه المجموعات البشرية في حياتهم 0

كذلك تتم دراسة وتأريخ بعض من العينات العظيمة بواسطة الكربون14 المستخدم ضمن مخابر في طوكيو 0 والتي ستقدم تأريخ دقيق ومعلومات أكبر عن حياه هؤلاء الأشخاص 0

ARCHAEOLOGICAL RESEARCH IN THE BISHRI REGION — REPORT OF THE ELEVENTH WORKING SEASON —

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October 25, 2009

The 11th working season of the Syria-Japan Archaeological Joint Mission to the Bishri Region was undertaken from October 11 to October 25, 2009. The members of the joint mission from the Syrian and Japanese parties are as follows.

Syrian party: Mohamad Sarhan (Director) and ‘Aid ‘Aisa.

Japanese party: Shogo Kume.

Before describing our activities, we would like to express our sincerest thanks to Dr. Bassam Jamous, the Director General of the Syrian Directorate General of Antiquities and Museums, and Dr. Michel Al-Maqdissi, the Syrian Supervising Adviser for this joint mission and the Director of Archaeological Excavations and Research at the Syrian Directorate General of Antiquities and Museums, who made available their generous help and heart-warming cooperation. Our sincerest thanks also go to local staff at Raqqa Museum. Especially, generous supports from Mr. Jajan and Mr. Sale were very helpful for us.

In this working season, we undertook cleaning and survey of an Early Bronze Age cemetery located at the Wadi Daba area near the site of Tell Ghanem al-‘Ali. The following is the results of the season.

Cleaning and survey of Early Bronze Age shaft graves at Wadi Daba cemetery near Tell Ghanem al-‘Ali

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Introduction

The fourth season of the field researches focused on Early Bronze Age (EBA) cemeteries near Tell Ghanem al-‘Ali was conducted from 11th to 18th October 2009. Previous seasons including survey, cleaning and sounding of the cemeteries in the area defined four unique associations of types of graves, which contain distinctive land use patterns across the landscape, i.e. 1) hilltop burial cairn, 2) hilltop cist/stone-chamber graves, 3) inland cist/stone-chamber graves with shaft graves, and 4) lowland shaft graves (Numoto and Kume 2009a, 2009b, n.d.).

Amongst them, this season targeted on the lowland shaft graves named Wadi Daba cemetery located at the modern village of Ghanem al-‘Ali in the Euphrates Valley, approximately 650 m southwest from Tell Ghanem al-‘Ali (Fig. 1). Our primary goal was to develop funerary dataset in the area

towards an attempt to explain relationships between the cemeteries, which should allow us to understand the nature of burial practices of the EBA communities in the middle Euphrates Valley.

Survey of Wadi Daba cemetery

Wadi Daba, a tributary wadi of the Euphrates, flows into a dwelling area of the modern village of Ghanem al-'Ali. In the area, fluvial processes have formed steep slopes on the both sides of the wadi course, eroding a terrace of the Euphrates (Fig. 1). The 2007 pilot survey documented two clusters of seriously plundered EBA shaft graves, excavated into the western slope of the course (Tsuneki 2008). Apparently, many shaft graves were also found just northwest of the cemetery, where a slope of the Euphrates terrace was formed, but recent house constructions seriously destroyed the archaeological loci.

In this season, one-day quick survey targeted on the slopes of the wadi bank and the river terrace was conducted to document spread of plundered graves. In particular, the slope of the river terrace was carefully examined, since preserved slopes in the area potentially imply EBA burial places. Most parts of the slopes have severely been destroyed by modern activities of house, road and canal constructions, etc (Fig. 1). However, well-preserved part of the slopes was located between a modern road and a small wadi, where several depressions excavated by robbers were identified. Combined the burials with the results of previous research, three units of grave-clusters were thus far defined in the Wadi Daba cemetery area (Fig. 1):

Unit A (Fig. 2) is located at the western slope of Wadi Daba, stretching c. 55 × 11 m. Some 20 entrances of plundered shaft graves and many depressions dug by robbers were identified. At the present, part of the slope has been cut, probably for borrowing soils. In addition, these seriously plundered graves have often been used as garbage pits by locals.

Unit B (Fig. 3) is also located at the western slope of Wadi Daba, covering an area of c. 20 × 30 m. Approximately 15 plundered shaft graves were identified. Southern edge of the area has been cut by modern road, suggesting these graves were principally part of Unit A. However, the cluster has currently been defined as an independent Unit for the reason of convenience of the investigations. The pits have also been used for garbage purpose.

Unit C (Figs. 4a and 4b) is located at the slope of the terrace of the Euphrates, some 150 m northwest of Unit B. This unit contains six to seven depressions excavated by grave robbers, covering an area of 15 × 20 m. Although a modern house and courtyard has occupied on the terrace immediately above the slope, the plundered area itself has retained original surface of the slope.

Cleaning of a plundered shaft grave at Unit C of Wadi Daba cemetery

Following the survey, we selected Unit C as an area for cleaning because of the well-preserved condition of the slope and robbers' pits. As a research procedure, a 4 × 4 m square was laid out, enclosing a large robbers' pit, to uncover plundered graves. At the same instance, a 1 × 11 m narrow square attached to the main square was also opened to attest spread of graves. Because several grave/robbers' pits were successfully indentified in the narrow square, the main square was enlarged to the west. Consequently, the research area was composed of the main 4 × 10 m square and 1 × 5 m sub-square (Fig. 5). Amongst the identified grave/robbers' pits, cleaning was concentrated on a shaft grave because of one-week limited time of the field season.

The rectangular entrance of the grave measures c. 1.2 × 0.8 m in length and width. The orientation of the grave indicates the NE-SW direction. The 2.5 m deep shaft was excavated with a slope toward the SW, then a pair of stairs were set, leading to the burial chamber. The height of the stairs measures some 0.8 m. The bottom of the stairs was constructed using two mud bricks. Three undressed gypsum stones were additionally laid on the bricks. Two monolithic gypsum stones were also used to seal the entrance of the chamber (Fig. 6 and 7). Very few artefacts were recovered from the shaft, but

collected an *Al Hamra* cigarette package suggest the grave was plundered within some twenty years.

The oval burial chamber measures c. 2.2 × 2.8 m in length and width, and c. 1.0 m in height. The chamber produced a massive pile of sherds at the SE quadrant (Fig. 8). They are including 14 complete vessels (Fig. 9) and many semi-complete sherds. Although intensive refitting has not yet been carried out, more than 30 individuals might have been placed there, suggesting multiple inhumations were performed. The sherds include both of fine and plain wares. In particular, a recovered vessel of so-called Black Euphrates Ware with spiral burnishing (Fig. 10) indicates that the burial is dated to Phase 4 (c. 2450-2300 BC) defined by A. Porter (Porter 2007).

Immediately beneath the pile, fragmented elements of human remains were attested. Damaged condition of the remains only allowed us to document a concentration of fragmented cranial bones at the eastern edge of the chamber. So far, no information of the bones has been obtained, since analysis of the human remains is still in progress.

The artefacts recovered from the pile also included a zoomorphic (probably sheep/goat) pendant (Fig. 11), fragments of bronze pin with mushroom-shaped head (Fig. 12) as well as various beads made of bone, shell and stone (Fig. 13).

Although there were no built-in features in the chamber, four postholes dug into the bottom were unearthed at the eastern edge. The interval of each hole measures c. 0.9 × 0.5 in major and minor axes. The location of the postholes, situated just beneath of the pile of sherds and human remains, may suggest a wooden coffin or a table for grave goods, or the like was laid out (Fig. 14).

Some remarks

The fourth season produced relatively rich funerary dataset of "lowland shaft graves", which would allow us to assess backgrounds of this type of cemetery and relationships with other categories. Of particular note is obtained concrete evidence of pottery sherds, dated the grave to c. 2450-2300 BC, since dating of graves was often disturbed by the scattered nature of the salvaged collections in our past researches. Intensive future work is still required at the cemetery, which possibly contains several well-preserved graves.

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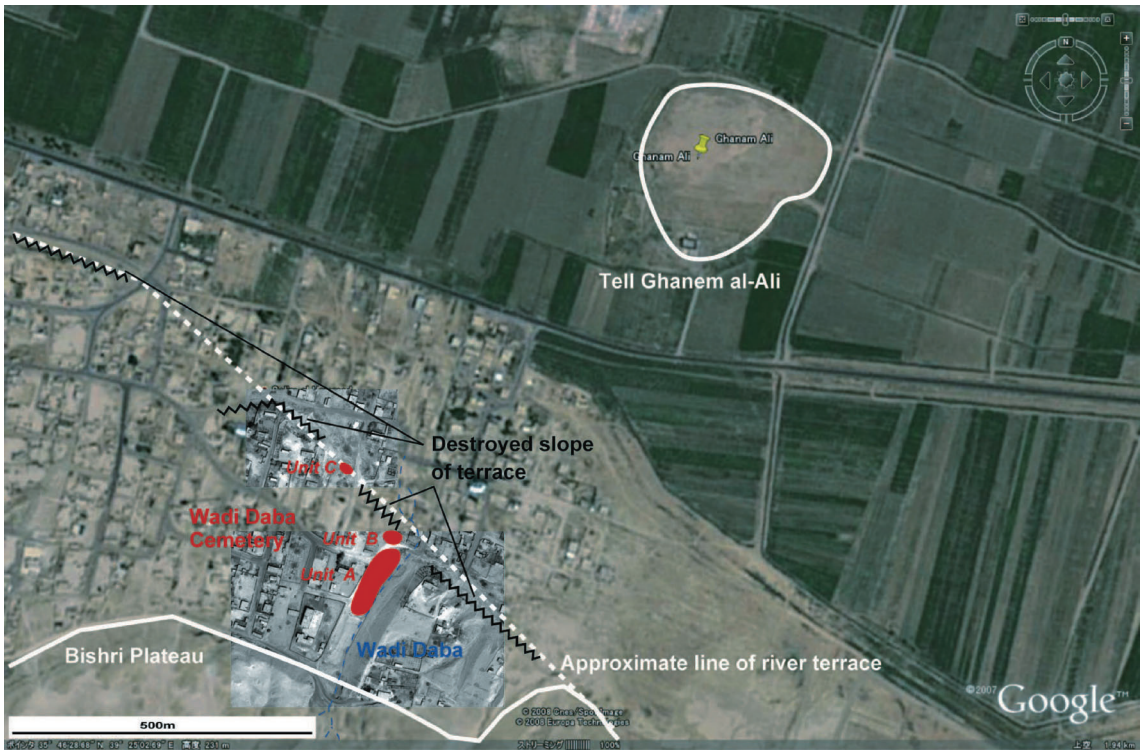


Fig. 1: Research area and distribution of plundered graves (Satellite image after *Google Earth*, partly supplemented by *Quickbird*).

Fig. 2: Plundered graves at Unit A, looking west.

Fig. 3: Plundered graves at Unit B, looking northwest. Graves are used as garbage pits.

Fig. 4a: Traces of depressions dug into the slope by grave robbers at Unit C, looking west.

Fig. 4b: Distant view of Unit C, looking south. Eastern edge of the slope of the Euphrates terrace is cut by modern road.

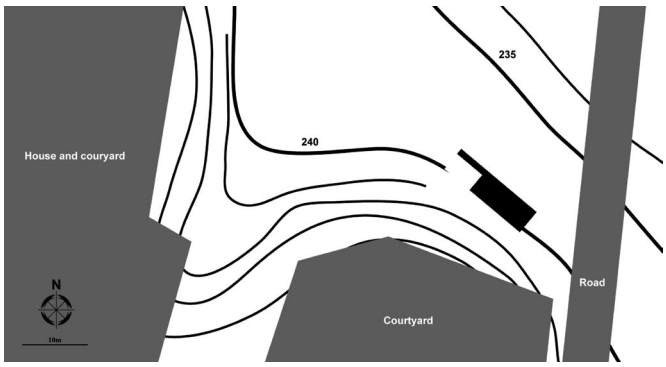


Fig. 5: Location of square laid out at Unit C. 1 m interval contour lines were reproduced from a 1/5000 topographic map published in Syria.

Fig. 6: Shaft of the grave. Two monolithic stones seal the entrance of the chamber.

Fig. 7: A pair of stairs, leading to the chamber. The bottom of the stairs is constructed using two mud bricks.

Fig. 8: A pile of pottery in the burial chamber.

Fig. 9: Complete vessels recovered from the chamber.

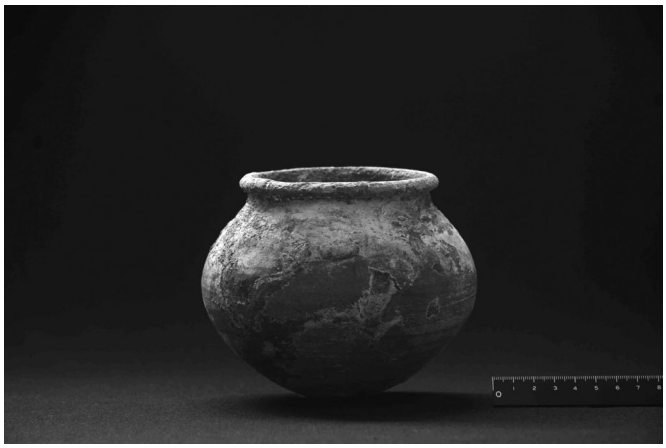


Fig. 10: So-called Black Euphrates Ware. Spiral burnishing is clearly observed.

Fig. 11: Zoomorphic (probably sheep/goat) pendant.

Fig. 12: Bronze pin with mushroom-shaped head.

Fig. 13: Examples of recovered beads.

Fig. 14: Postholes unearthed from the bottom of the chamber.

الموسم الحادي عشر من أعمال البعثة الأثرية السورية اليابانية المشتركة في منطقة البشري

بدأت أعمال البعثة السورية اليابانية المشتركة في منطقة جبال البشري بتاريخ 11 تشرين الأول وانتهت بتاريخ 25 تشرين الأول من عام 2009 0

احمد سلطان مدير الجانب السوري

كاتسوهيكو اونوما مدير الجانب الياباني

بداية نتقدم بخالص الامتنان والشكر الجزيل للدكتور بسام جاموس المدير العام للآثار والمتاحف في سورية والدكتور ميشيل مقدسي مدير التنقيب والدراسات الأثرية في سورية والمشرف المستشار لهذا البحث الأثري , لما قدموه من دعم ومساعدة لإنجاح في إنجاح هذا الموسم 0

تركزت أعمال هذا الموسم على بحث ودراسة منطقة واحدة من مناطق البحث والتي اشتملت على تنظيف وتسجيل ودراسة المدافن العميقة (shaft graves)المنتشرة على طول حافة وادي الضبع المجاور لموقع تل غانم العلي 0

مسح المدافن الممتدة على حافة وادي الضبع

(هيروتوشي نوموتو, بروفيسور جامعة طوكيو 0 شوغو كومي , طالب , جامعة طوكيو)

حيث يعتبر هذا هو الموسم الرابع من عمل هذا الفريق ضمن بحث هذه البعثة المشتركة . حيث تتركز أبحاث هذا الفريق على دراسة مدافن عصر البرونز القديم المجاورة لتل غانم العلي (حوالي 1كم جنوب التل)

فقد اشتملت أعمال هذا الفريق في المواسم السابقة على مسح ودراسة المدافن المنتشرة في هذه المنطقة وقد كشفت هذه الدراسة عن أربعة نماذج من المدافن التي توزعت على الحافة الجبلية المقابلة لتل غانم العلي 1- المدافن الحلقية (Tumuli) 2 المدافن الحجرية (stone chamber) توضعت هذه المدافن فوق الحافة الجبلية 3- المدافن الحجرية (stone chamber) والمدافن العميقة أيضاً 4- المدافن العميقة (shaft) توضعت هذه المدافن في المنطقة المنخفضة أسفل الحافة الجبلية0

تركز البحث لهذا الموسم على دراسة المدافن العميقة (shaft graves) الواقعة في المنطقة المنخفضة على حافة وادي الضبع المجاور لبلدة غانم العلي على الفرات الأوسط , حوالي 650 م جنوب غربي تل غانم العلي , حيث تهدف هذه الدراسة إلى محاولة فهم طبيعة وأسلوب الدفن لمجتمعات عصر البرونز القديم على حوض الفرات الأوسط 0

فخلال مسح المنطقة الممتدة على طول الوادي تبين وجود مجموعة من المدافن العميقة (shaft graves) المنهوبة التي تعود إلى عصر البرونز القديم منتشرة على حافة الوادي الذي يمر ضمن القرية , حيث تم تقسيم هذه المدافن إلى ثلاثة قطاعات A . B . C 0

فقد تم إجراء السبر الاختباري للقطاع C الذي يبعد حوالي 150شمال غرب القطاع B , ويغطي مساحة 15×20 م , حيث تم تحديد مربع بقياس 4×4م , تضمن مدفن منهوب

كما تم تحديد حفرية بقياس 1×11م ملاصق للمربع السابق بهدف التحقق من امتداد هذه المدافن المنهوبة في القطاع , والتي امتدت باتجاه الغرب 0 وبناء على ذلك فقد تشكلت منطقة البحث من مربعين بقياس 4×10م و 1×5م , حيث تركز البحث على تنظيف وتوثيق المدافن العميقة (shaft graves) فقد تبين أن مدخل هذا المدفن كان بقياس 1.2×0.8م , وباتجاه شمال شرق وجنوب غرب , هذا النوع من المدافن كان بعمق 2.5م منحدراً باتجاه الجنوب الغربي حيث توضعت درجتين من الحجر الكلسي مواجهة لحجرة الدفن , وقد بلغ ارتفاع الدرجتين حوالي 80سم وعند أسفل الدرجتين وجد تشييداً لقطعتين من اللبن , أيضا وجد بداخل الحجرة قطعتين من الحجر الكلسي الضخم والذي كان مستخدم لإغلاق مدخل حجرة الدفن وخلال تنظيف حجرة الدفن وجد مجموعة من الأوساخ المتناثرة ضمن الحجرة كعلبة دخان وغيرها مما يدل على أن هذا المدفن تعرض للنهب من قبل لصوص الآثار 0

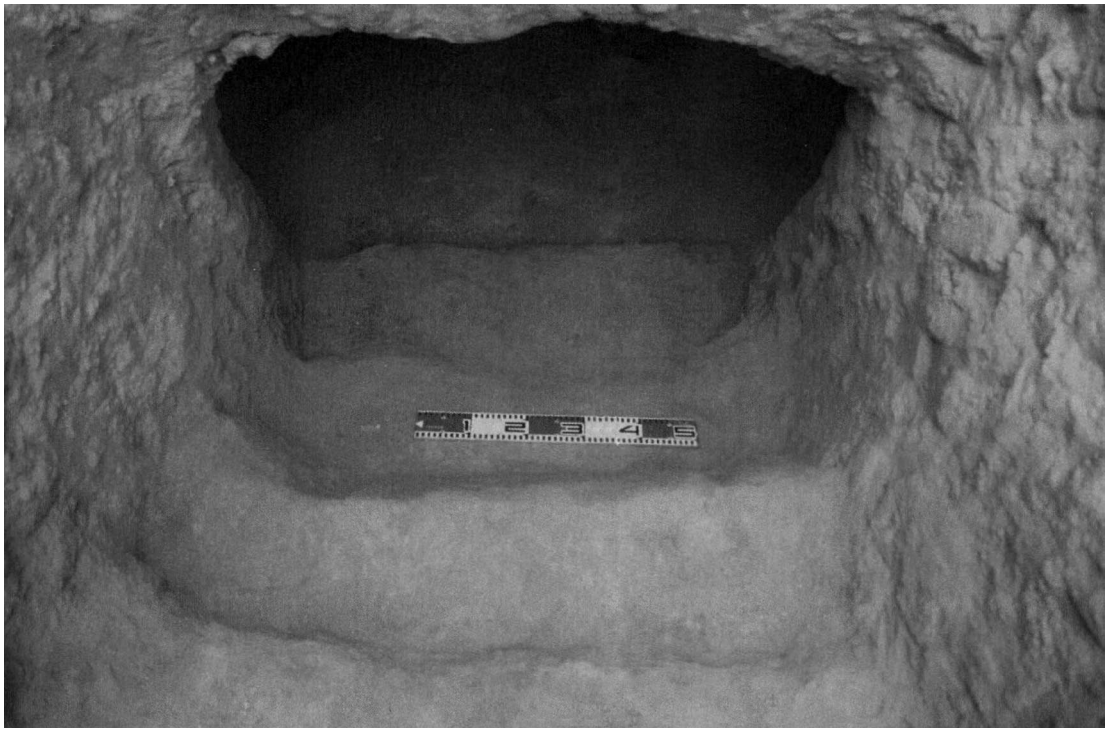
حجرة الدفن كانت ذات شكل بيضاوي بقياس 2.2×2.8م وارتفاع 1م , وفي الزاوية الجنوبية الغربية داخل حجرة الدفن تجمع ركام ضخم أحتوى على مجموعة من 14 آنية فخارية بحالة جيدة بالإضافة إلى الكثير من الكسر الفخارية التي تنوعت بين منتجات ذات الجودة العالية ومنتجات بسيطة وعادية , إحدى الأواني الفخارية كانت من منتجات فخار الفرات الغامق (Black Euphrates ware) مما ساعد على تأريخ هذا المدفن الذي يعود إلى عصر البرونز القديم (حوالي 2300 - 2450 قبل الميلاد) ومن الممكن أن يكون قد دفن حوالي 30 شخص بداخل هذا المدفن مما يشير إلى وجود دفن جماعي ضمن هذه النوع من المدافن 0

كما وجد أيضاً بقايا لعظام إنسانية اشتملت على بقايا جمجمة , هذه البقايا لا تزال تحت الدراسة والتحليل 0 بالإضافة إلى كسر لمسمار برونزي وعدد كبير من الخرز العظمي 0

أيضاً تم الكشف عن أربعة حفر عند أسفل الحافة الشرقية من حجرة الدفن بلغ أبعاد كل حفرة 90×50سم , مما يدل على وجود تابوت خشبي أو مكان مصطبة لمرفقات الدفن 0

لقد قدمت أبحاث هذا الموسم نتائج همة ساهمت في تقديم معلومات أوسع عن طقوس الدفن للمدافن العميقة (shaft graves) في الجزء المنخفض لمنطقة البحث , كما تسمح في تحديد علاقة هذا النوع من المدافن بالمدافن الأخرى 0

حيث قدمت هذه الدراسة دليل واضح وأكيد في تأريخ هذه المدافن إلى عصر البرونز القديم 4 (2450 – 2300 ق.م) 0



صورة لمدخل المدفن مع حجرة الدفن

ARCHAEOLOGICAL RESEARCH IN THE BISHRI REGION — REPORT OF THE TWELFTH WORKING SEASON —

November 21, 2009

Geological and Geographical Field Survey in the Twelfth Working Season

Kazuhiro TSUKADA (Assistant Professor, Nagoya University)
Yusuke KATSURADA (Research Fellow, Nagoya University)

Introduction

The geological and geographical field survey in this working season was carried out in the period from the 17th to the 21st of November 2009 focusing on petrological description of the stone tools gathered at Tell Ghanem al-Ali excavation site, and collection of pebble samples at the 5 locations near the tell for further analysis in Nagoya University. Plenty of stone tools and fragments were found at Tell Ghanem al-Ali. The most of them seem that they were made of pebbles since their natural surfaces are recognised. The purpose of the study in this working season is to find a clue about the source of these stone tools from geological points of view.

Drs. Bassam Jamous and Michel Al-Maqdissi of the Syrian Directorate General of Antiquities and Museums kindly allowed us to carry out our study in Ar-Raqqa Prefecture. Mr. Ibrahem Khalil of Raqqa Museum helpfully assisted us to carry out the field survey. To whom we would like to express our gratitude.

Geological backgrounds

The rocks around Ghanem al-Ali consist of Neogene sedimentary rocks and Quaternary sediments of various origins. The Neogene sedimentary rocks, the basement of the area, consist of gypsum with fine-grained acidic tuff intercalations.

The Quaternary sediments are mainly made up of well-stratified silts, sands and pebbles overlie the Neogene sedimentary rocks abutting with unconformity. The sediments forming several terraces along the River Euphrates can be divided into the following two types; TD1 composed largely of alternating beds of grey fine to course sands and granule to boulder layers, TD2 composed mainly of milky- to yellowish- white silts and sands with minor intercalations of granule to pebble layers. TD1 is generally exposed in lower than TD2.

Table 1: Pebbles of Tell Ghanem al-Ali (from the 5th working season).

diameter	C	P	R	G	FSR	B	MR	Ss	M	Ms	Total	%
> 5 cm	1	2	1		2		1				7	2.2%
3–5 cm	1										1	0.3%
2–3 cm		1	4								5	1.6%
< 2 cm	100	72	37	44	20	6	9	7	2	3	300	95.9%
Total	102	75	42	44	22	6	10	7	2	3	313	100.0%
%	32.6%	24.0%	13.4%	14.1%	7.0%	1.9%	3.2%	2.2%	0.6%	1.0%	100.0%	

Keys: C:chert; P: pegmatite; R: rhyolite; G: granites; FSR: fine silicious rock; B: basalt; MR: metamorphic rocks; Ss: Sandstones; M: marl; Ms: Mudstone. n=313.

Table 2: Pebbles of Zor Shammar (from the 5th working season).

diameter	C	P	R	G	FSR	B	MR	Ss	M	Ms	Total	%
> 5 cm	1	1			2						4	0.6%
3–5 cm	6	10	3	2	12		1		1		35	4.9%
2–3 cm	12	12	16	2	5		4		2		53	7.4%
< 2 cm	123	144	114	76	95	43	13	3	11	3	625	87.2%
Total	142	167	133	80	114	43	18	3	14	3	717	100.0%
%	19.8%	23.3%	18.6%	11.2%	15.9%	6.0%	2.5%	0.4%	2.0%	0.4%	100.0%	

Keys: C:chert; P: pegmatite; R: rhyolite; G: granites; FSR: fine silicious rock; B: basalt; MR: metamorphic rocks; Ss: Sandstones; M: marl; Ms: Mudstone. n=717.

The granules, pebbles and boulders, clast-supported, well sorted, generally include well-rounded flatten clasts of red chert, granites, rhyolite, basalt and fine (microcryptic) siliceous rocks in a matrix of middle grained sands. The deposits are generally well stratified with various kinds of sedimentary structures such as grading, cross-bedding and clast imbrications. East-going paleo-current is supposed by the sedimentary structures.

Quaternary sediments sampled at the Fifth working season were analysed and the results are shown in Tables 1 and 2.

Petrological description of the stone tools

444 samples for petrological description were selected from the stone tools, that are already collected at the excavation site of Tell Ghanem al-Ali in the past working seasons (Figs. 2–4). In addition, 361 stone tools and/or fragments were newly collected at the Tell Ghanem al-Ali setting the sampling locality shown in Figure 5. 121 stone tools/fragments were also collected all around the tell. All of the samples were petrologically described during the period of this working season.

As for the lithic materials from the excavation sites, there are plenty of stone tools which have natural surfaces of pebbles as shown in Figure 2. They consist of various rocks such as fine silicious rock, coarse rhyolite (Fig. 3), quartzite, basalt, sandstone, chert, etc. Most of them are fine silicious rocks (known as the archeological term “flint”) and some of them contain fossils (Fig. 4). Most of the stone tools from the excavation sites are larger than 30 mm in diameter. The results of the petrological description are summarised in Table 3, 4 and 5. FSR Index is calculated by the equation of “FSR index = non-FSR / FSR” where FSR: the number of fine silicious rocks, non-FSR: the number

Table 3: Rock differences of the stone tools at Tell Ghanem al-Ali excavation site.

diameter	FSR *NS*	FSR *NNS*	FSR *NS, f*	FSR *NNS, f*	CR *NS*	Q *NS*	C *NS*	B *NS*	Ss *NS*	Total	%
> 5 cm	197	4	4	0	3	1	0	4	0	213	48.0%
3–5 cm	158	7	3	0	2	1	2	0	1	174	39.2%
2–3 cm	30	5	1	1	0	0	0	0	0	37	8.3%
< 2 cm	16	4	0	0	0	0	0	0	0	20	4.5%
Total	401	20	8	1	5	2	2	4	1	444	100.0%
%	90.3%	4.5%	1.8%	0.2%	1.1%	0.5%	0.5%	0.9%	0.2%	100.0%	

Keys: FSR: fine silicious rock ; CR: coarse rhyolite; Q: quartzite; C: chert; B: basalt; Ss: Sandstones; *NS*: natural surface; *NNS*: no natural surface; *f*: fossil. n=444. FSR index (non-FSR/FSR) = 0.0326.

Table 4: Rock differences of the stone tools at the sampling locality in Tell Ghanem al-Ali.

diameter	FSR *NS*	FSR *NNS*	FSR *NS, f*	CR *NS*	CR *NNS*	Q *NS*	C *NS*	B *NS*	Ss *NS*	Ms *NS*	Ms *NNS*	Total	%
> 5 cm	25	0	2	0	0	1	0	0	0			28	7.8%
3–5 cm	145	21	17	10	2	2	3	1	3	1		205	56.8%
2–3 cm	57	42	1	2	1	0	1	0	0			104	28.8%
< 2 cm	6	13	2	2	0	0	0	0	0		1	24	6.7%
Total	233	76	22	14	3	3	4	1	3	1	1	361	100.0%
%	64.5%	21.1%	6.1%	3.9%	0.8%	0.8%	1.1%	0.3%	0.8%	0.3%	0.3%	100.0%	

Keys: FSR: fine silicious rock ; CR: coarse rhyolite; Q: quartzite; C: chert; B: basalt; Ss: Sandstones; Ms: Mudstones; *NS*: natural surface; *NNS*: no natural surface; *f*: fossil. n=361. FSR index (non-FSR/FSR) = 0.0464.

Table 5: Rock differences of the stone tools at the surface of Tell Ghanem al-Ali.

diameter	FSR *NS*	FSR *NNS*	FSR *NS, f*	FSR *NNS, f*	CR *NS*	Q *NS*	C *NS*	B *NS*	Ss *NS*	Total	%
> 5 cm	41	0	0	0	1	1	0	0	0	43	35.5%
3–5 cm	38	8	1	1	1	1	0	1	0	51	42.2%
2–3 cm	11	10	2	1	0	1	1	0	0	26	21.5%
< 2 cm	0	0	0	0	0	0	0	0	1	1	0.8%
Total	90	18	3	2	2	3	1	1	1	121	100.0%
%	74.4%	14.9%	2.5%	1.7%	1.7%	2.5%	0.8%	0.8%	0.8%	100.0%	

Keys: FSR: fine silicious rock ; CR: coarse rhyolite; Q: quartzite; C: chert; B: basalt; Ss: Sandstones; *NS*: natural surface; *NNS*: no natural surface; *f*: fossil. n=121. FSR index (non-FSR/FSR) = 0.0708.

of the other rocks than fine silicious rocks of all the stone tool/fragment samples obtained. Smaller value of FSR index implies the inclination to FSR selection. Although the diameter ranges are quite different, the low percentage of fine silicious rocks in the gravel beds shown in Tables 1 and 2 implies the selectivity of fine silicious rocks for stone tools. Petrological composition of the pebbles in stone-tool-size range is then preferable.

Pebble sampling

Large pebbles, that are well rounded and sized roughly over 30 mm, were sampled at 5 locations as shown in Figure 9. Samples collected at the sites A–D are the pebbles of Quaternary sediments and the samples at the site E are the floodplain deposits of the River Euphrates. Photographs taken at these sampling locations are shown in Figures 10–14. Further studies such as petrological description for sampled pebbles are prepared.

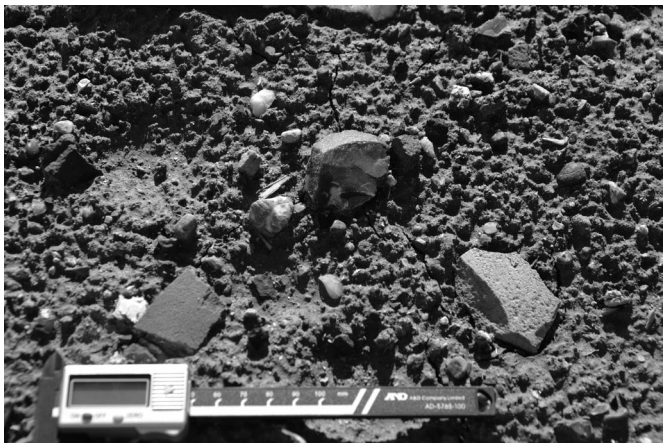


Fig. 1: Picture of stone tools/fragments found at Tell Ghanem al-Ali.

Fig. 2: Stone tools collected at the Tell Ghanem al-Ali excavation sites. They have natural surfaces of pebbles.

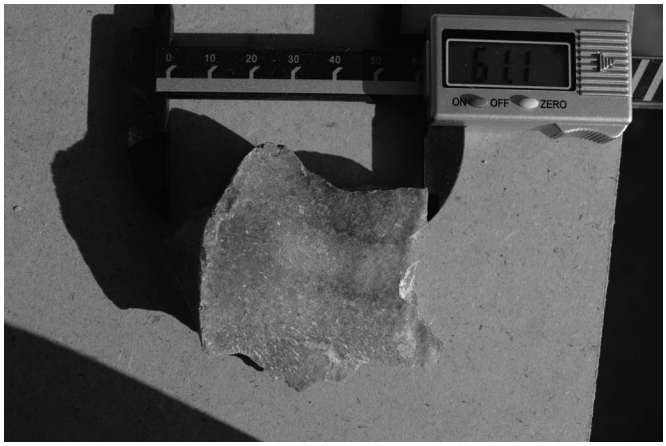


Fig. 3: Course rhyolite stone tool collected at the Tell Ghanem al-Ali excavation site.

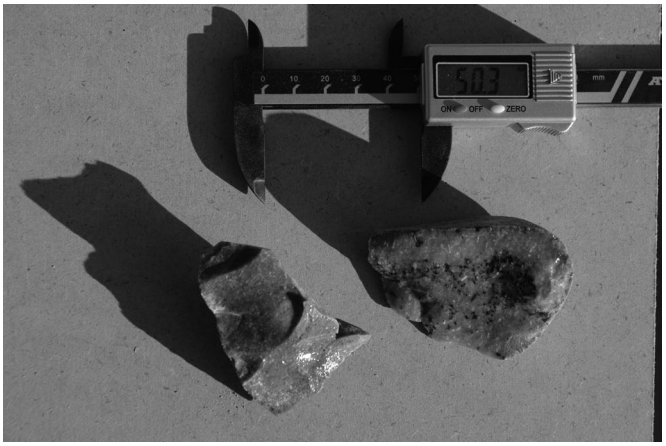


Fig. 4: Fine silicious rocks ("flint") stone tool collected at the Tell Ghanem al-Ali excavation sites. These rocks contain fossils.

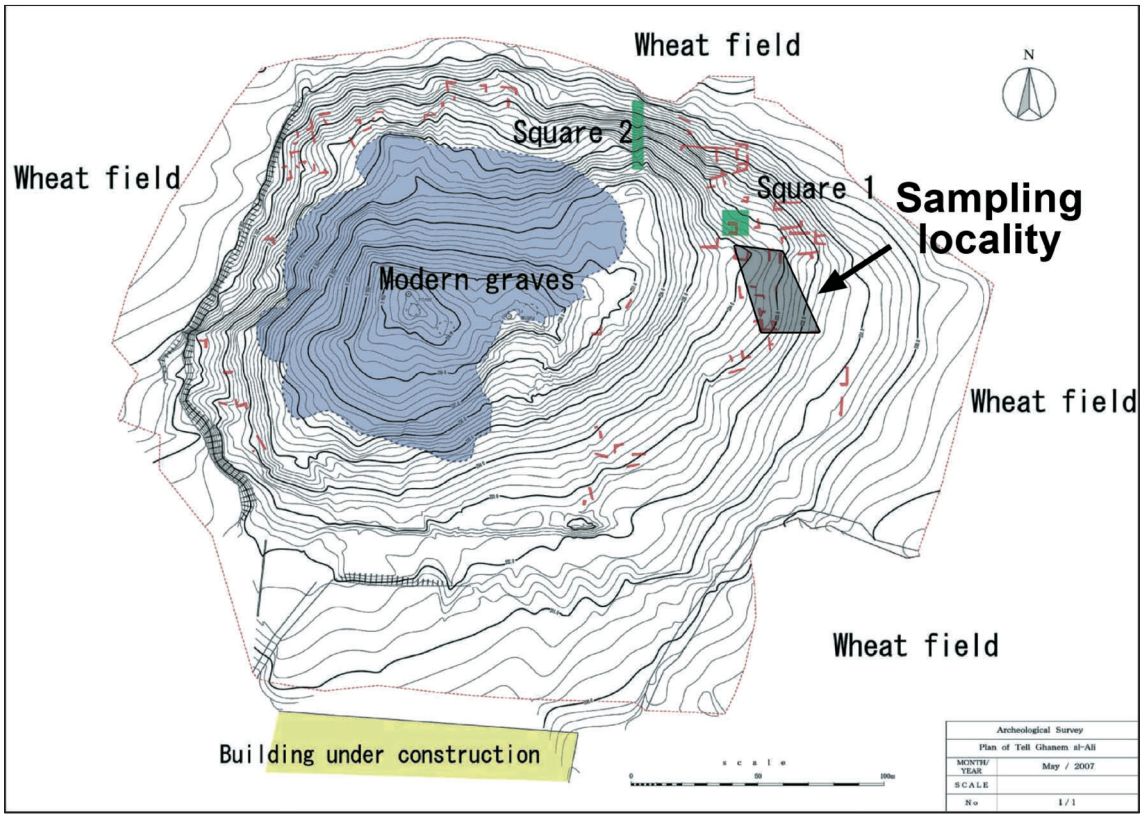


Fig. 5: Map showing the sampling locality at the Tell Ghanem al-Ali.

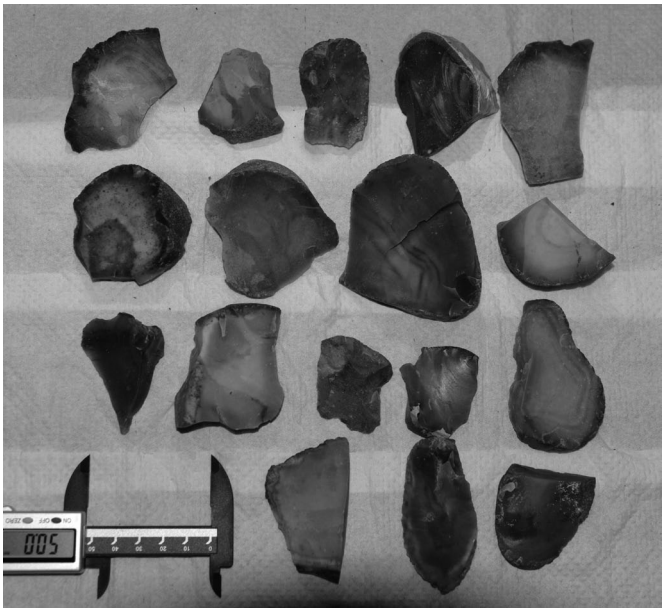


Fig. 6: Variation of fine silicious rocks used for stone tools. Stone tools were collected at the Tell Ghanem al-Ali.

Fig. 7: Chert stone tool collected at the Tell Ghanem al-Ali sampling localities.

Fig. 8: Fine silicious rock stone tool collected at the Tell Ghanem al-Ali sampling localities. Fossils of bivalve shells can be seen.

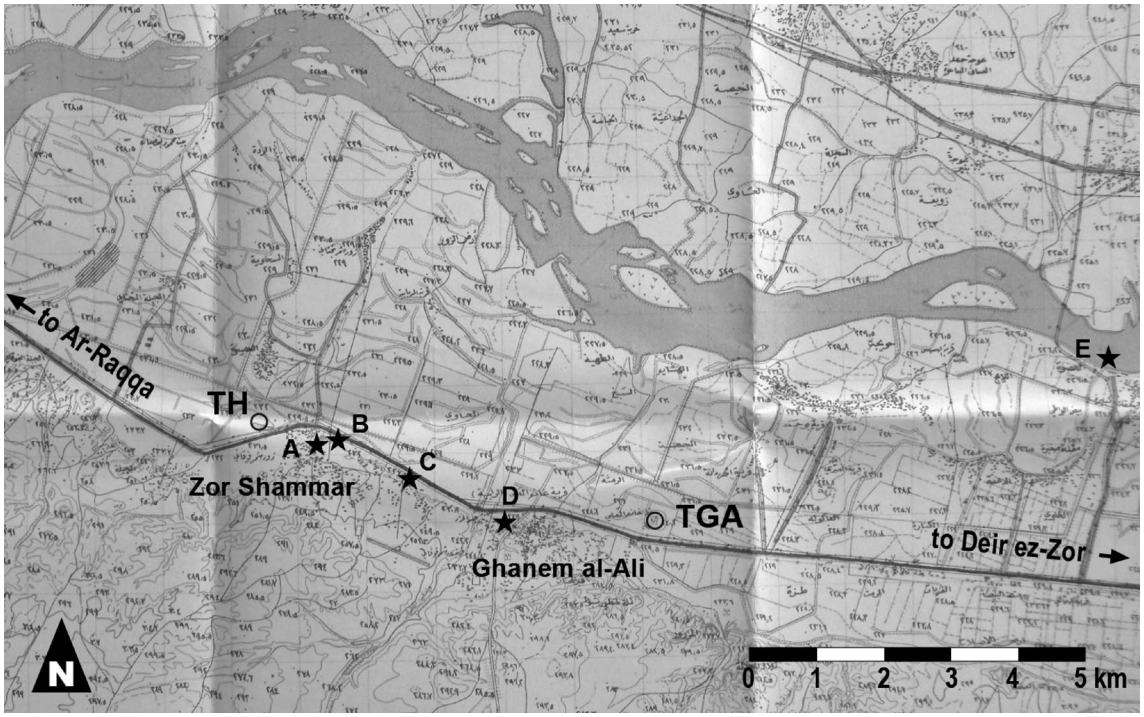


Fig. 9: Map showing the 5 locations of pebble sampling. TH: Tell Hamadeen; TGA: Tell Ghanem al-Ali.

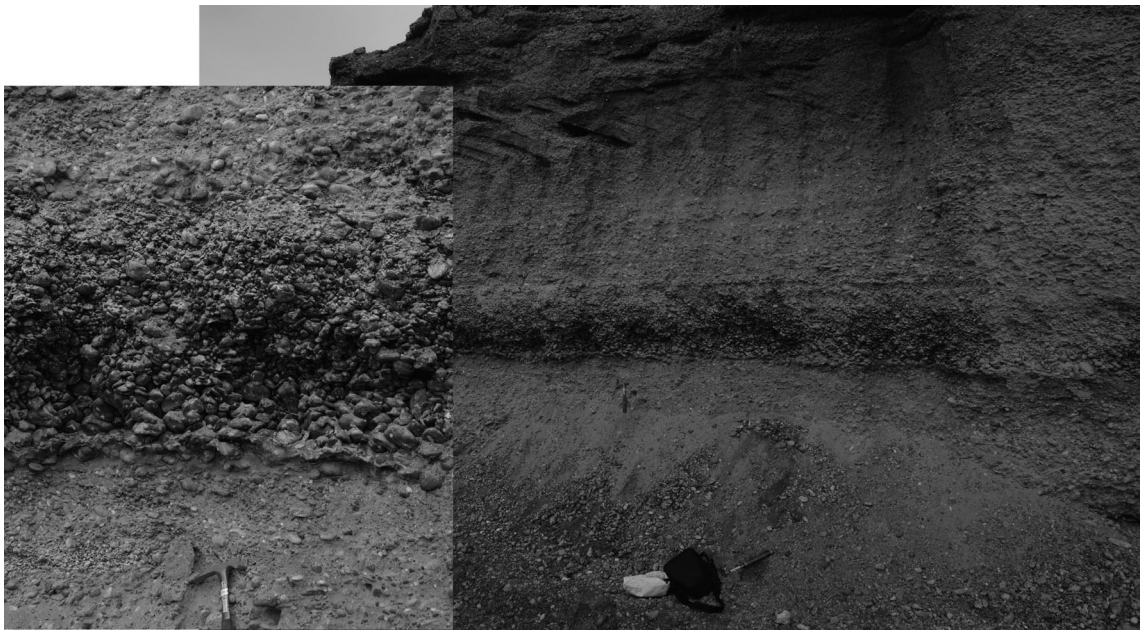


Fig. 10: Photograph of Site A. Left is the close up of the gravel bed.

Fig. 11: Photograph of Site B.

Fig. 12: Photograph of Site C.

الموسم الثاني عشر من أعمال البعثة الأثرية السورية اليابانية المشتركة في منطقة البشري

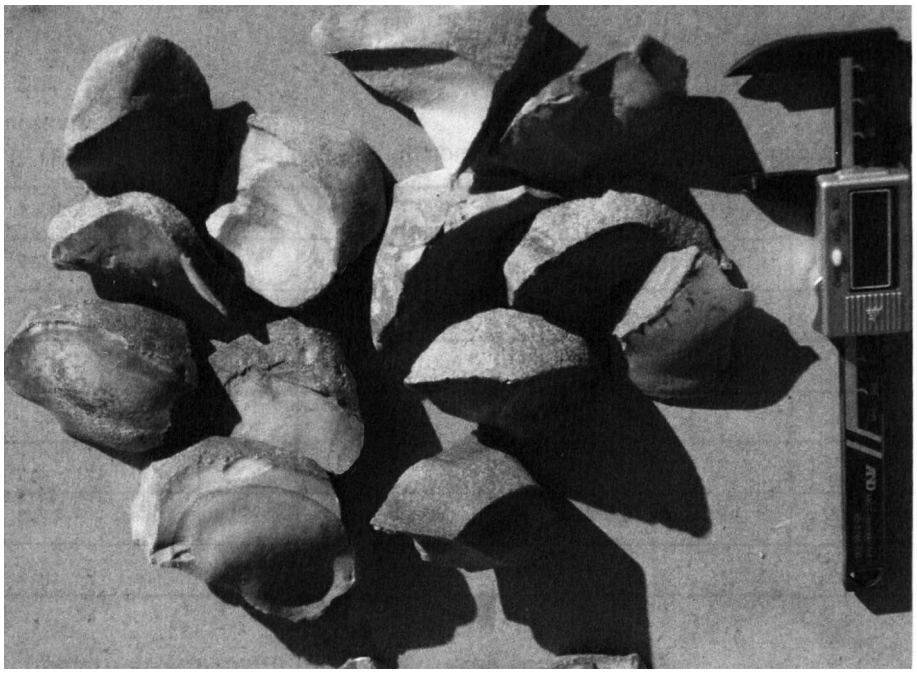
أربعة أيام فقط لإعمال الموسم الثاني عشر للبعثة الأثرية السورية اليابانية والتي امتدت في الفترة الواقعة من17 ولغاية21 تشرين الثاني من عام 2009

حيث اقتصرت أعمال هذه البعثة لهذا الموسم على فريق جيولوجي واحد تركز عمله في المنطقة المجاورة لتل غانم العلي 0

مسح جيولوجي وجغرافي للمنطقة المحيطة بتل غانم العلى :

(كازوهيرو تسو كادا , جامعة ناغويا 0يوسوكي كاتسورادا , جامعة ناغويا)

وتهدف أعمال هذا الموسم إلى دراسة ووصف الأدوات الحجرية التي تم جمعها من تل غانم العلي , وأيضاً جمع عينات حصوية من المنطقة رقم5 المجاورة لتل غانم العلي , من أجل تحليلها ودراستها في جامعة ناغويا , وتهدف هذه الدراسة بشكل عام إلى الكشف والتعرف على مصدر هذه الأدوات الحجرية من وجهة نظر جيولوجية 0



و تتألف الأحجار الصخرية حول تل غانم العلي من صخور رسوبية وترسبات رباعية من مصادر متنوعة ,إذ تتألف الطبقات السفلية في هذه المنطقة من تكوينات من الجبس والحمض 0

تتكون هذه الترسبات الرباعية من طبقات طينية تحتوي على الرمل والحصى , حيث دلت هذه الترسبات على وجود مصاطب عديدة لنهر الفرات يمكن تقسيمها إلى قسمين مختلفين 0

فقد تم اختيار 444 عينة من الأدوات الحجرية من حفريات موقع تل غانم العلي بهدف دراستها ووصفها , بالإضافة إلى 361 عينة من الأدوات الحجرية كان قد تم جمعهم من مواسم سابقة من تل غانم العلي 0

تم أخذ نماذج من هذه العينات الحجرية إلى اليابان بهدف تحليلها ضمن مخابر جامعة ناغويا , حيث لا تزال حاليا قيد الدراسة 0

إذاً اقتصرت أعمال هذا الموسم على دراسة الأدوات الحجرية من تل غانم العلي والمنطقة المحيطة فيه من وجهة نظر جيولوجية بهدف التعرف على طبيعة تكوين هذه الأحجار ومصدرها ومنشأها 0

ARCHAEOLOGICAL RESEARCH IN THE BISHRI REGION — REPORT OF THE THIRTEENTH WORKING SEASON —

Katsuhiko OHNUMA
Director of the Japanese Archaeological Mission to Bishri
(Kokushikan University, Tokyo, JAPAN)
Mohamad SARHAN
Director of the Syrian Archaeological Mission to Bishri
(Department of Antiquities and Museums, Raqqa, SYRIA)

December 27, 2009

The 13th working season of the Syria-Japan Archaeological Joint Mission to the Bishri Region is now in progress under the plan of survey with a duration from December 24 to December 30, 2009. The members of the joint mission from the Syrian and Japanese parties are as follows.

Syrian party: Mohamad Sarhan (Director).

Japanese party: Yasuyoshi Okada (Director), Saeko Miyashita, Naoko Fukami, Ryuichi Yoshitake and Sumiyo Tsujimura.

Before describing our activities, we would like to express our sincerest thanks to Dr. Bassam Jamous, the Director General of the Syrian Directorate General of Antiquities and Museums, and Dr. Michel Al-Maqdissi, the Syrian Supervising Adviser for this joint mission and the Director of Archaeological Excavations and Research at the Syrian Directorate General of Antiquities and Museums, who made available their generous help and heart-warming cooperation. Our sincerest thanks also go to local staff at Raqqa Museum.

In this working season, the plan of our survey includes firstly the monitoring of the current condition of the site of Tell Ghanem al-‘Ali, and then the architectural investigations into the surrounding area. Particularly our major concern is about the construction of the ruins of Heraqlah, located in the western outskirt area of Raqqa, from the viewpoint of architectural comparison to our Bishri region.

Monitoring survey of the site of Tell Ghanem al-‘Ali and the architectural investigations into the surrounding area

Yasuyoshi OKADA (Professor, Kokushikan University, Tokyo)

Outline of the season’s work

The itinerary of the mission started at Damascus on December 24. On the way to Raqqa, we paid a visit first to the region of Palmyra, including an ancient dam site at Harbaqa and early Islamic fortifications of Qasr al-Heir al-Sharqi, both of which must be a proud of this country as great testimonies of ancient construction technology though not in the Bronze age. On December 26, we entered the Bishri mountain area, and then reached the site of Tell Ghanem al-‘Ali.

On December 27, according to our itinerary plan, we will undertake a preliminary architectural investigation at the site of Helaqra, of which the design and construction with mortared rubble is of our great interest not only in the excellent technology but in its mysterious character. On the same day, we are to move to the region of Aleppo and Hama. Further on December 29, we hope

to learn mud-brick masonry technique thoroughly at the site of Mishrifeh, ancient Qatna, representing the Early Bronze Age culture of Syria, parallel in the age with Tell Ghanem al-'Ali..

Monitoring the current condition Tell Ghanem al-'Ali

On December 26, following a visit to Qasr al-Heir al-Sharqi, we could reach Tell Ghanem al-'Ali in the early afternoon and immediately undertook the detailed observation of excavated trenches and surrounding surface conditions. What should be noted are as follows:

1) Structural remains excavated in Trenches 1 and 2 so far seem to be gradually damaged under the open air condition (Fig. 1). The deep-sounding spot at the northern end of Trench 2 is well preserved, but is seemingly of danger for temporary visitors (Fig. 2).
2) The trench of the latest excavation on the northern slope is totally covered with a fabric sheet, and therefore appear to be preserved very well (Fig. 3).
3) On the surface of the tell, particularly eastern and western slopes, a lot of vestigial wall lines have appeared presumably thanks to the rainfall on the day before (Figs. 4 and 5).
4) In general, the tell is well maintained for preparation of further archaeological investigations including the work of our local guard.

Fig. 1 Trench 1

Fig. 2 Trench 2

Fig. 3 The latest opened trench

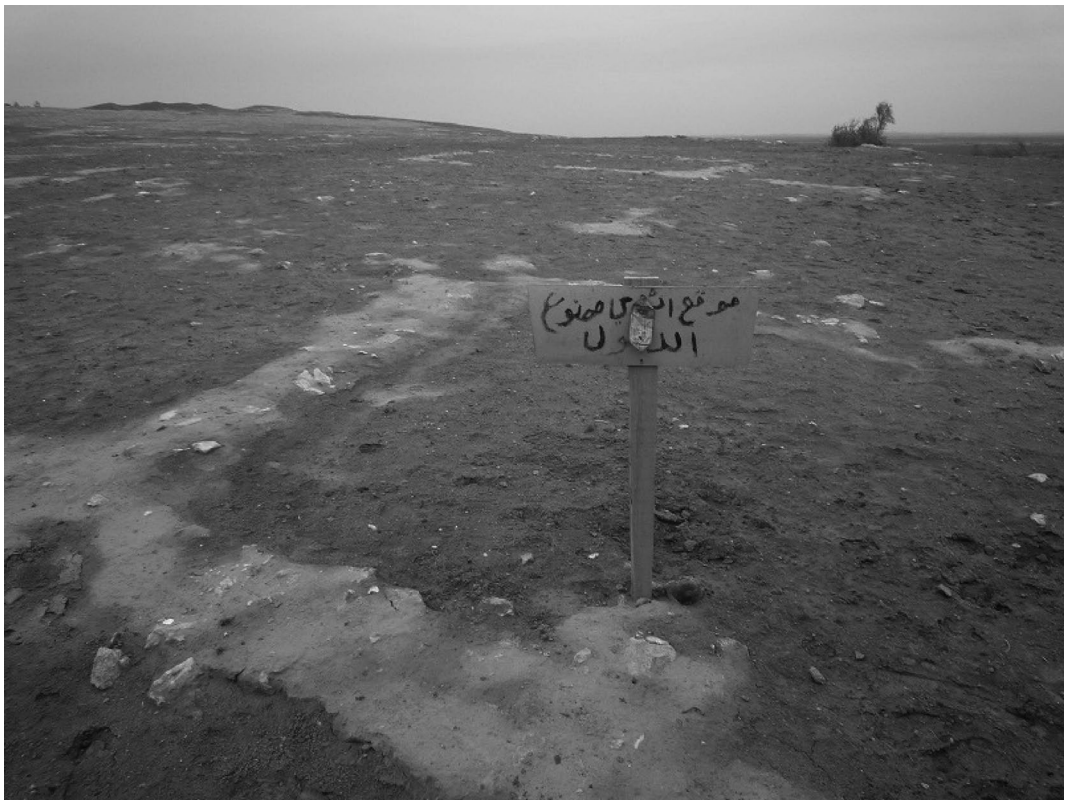


Fig. 4 Vestigial walls on the eastern slope

Fig. 5 Vestigial walls on the western slope

الموسم الثالث عشر من أعمال البعثة الأثرية السورية اليابانية المشتركة في منطقة البشري

فقد اقتصرت أعمال هذا الموسم على التحضير لأعمال النشر لهذا البحث من خلال تقديم كل فريق من أعضاء البعثة تقرير عن نتائج الأبحاث والدراسات التي تمت في المنطقة خلال المواسم السابقة0

حيث كان هناك تعاون مشترك مع المديرية العامة للآثار والمتاحف في أعمال الترجمة والنشر للغة العربية في مجلة الرافدين 0

الشكر الجزيل لكل من ساهم في إنجاح كل المواسم السابقة من أعمال البعثة السورية اليابانية المشتركة في منطقة البشري وعلى رأسهم الدكتور بسام جاموس المدير العام للآثار والمتاحف والدكتور ميشيل مقدسي مدير التنقيب والبحث العلمي في المديرية العامة للآثار والمتاحف والمشرف المستشار لهذا البحث العلمي لما قدموه من دعم مساندة لعمل البعثة 0

كاتسوهيكو اونوما
مدير الجانب الياباني

احمد سلطان
مدير الجانب السوري

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