

UR REGION ARCHAEOLOGY PROJECT

REPORT 2014

Ur Region Archaeology Project

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Cover photo: Babylonian cuneiform tablet from Tell Khaiber, an account ledger c.1750 BC.

Research replaces looting

The scale of the disaster that befell Iraq's archaeological sites as a consequence of the events of 2003 is incalculable. While artefacts stolen from the Museum are at least documented, the random looting and organized robbery from ancient sites has resulted in a loss that cannot even be estimated. This is not just Iraq's loss, but the whole world's. It is a tragedy that needs to be tackled by local and international bodies working in cooperation. Today, however, the land of Sumer is the scene of activities by many international and Iraqi archaeological teams, and I feel that the wheel has turned full circle: the time of war and looting is over, and the time of positive action and scientific research has returned.

The land of Sumer has always been associated in human imagination with innovation and eternity. This is the land that witnessed the birth, among other things, of writing and libraries, and of law and courts of justice. It bears the imprint of the earliest civilization, of the earliest urban settlements. Today's discoveries bear witness to this, illuminating the human past. The legacy of Sumer is the heritage of all mankind, and the Iraqi people are its trustees.

I strongly support the research and endeavours of the University of Manchester's Ur Region Archaeology Project, both as Governor of Thi Qar, and in my capacity as Head of the Ur Revitalization Project. Culture unites us. We are all children of this planet, so let us work to enrich life through all that is cultural and human, and renew hope in mankind and in the future.

Yahya Al-Nasiry, Governor of Thi Qar Province



Governor Al-Nasiry visiting the excavations at Tell Khaiber.

Research: excavating the public building

Public building of Old Babylonian date (18th century BC)

Functioned as regional administrative centre

Hammurabi king of Babylon conquered southern Iraq in c. 1763 BC, and there followed a period of peace and prosperity. The public building at the centre of the settlement, which continues to be a major focus of our work, probably dates originally to this time.

For the first five weeks of the excavation we removed the crusty topsoil across an area of 1200 sq m, mapped the mud-brick walls underneath, and combined them with information from satellite images. The outline of the building then became clear: the monumental edifice is a single building in two distinct parts, one having been added on later.

Much of the internal lay-out, and the main entrance, remain

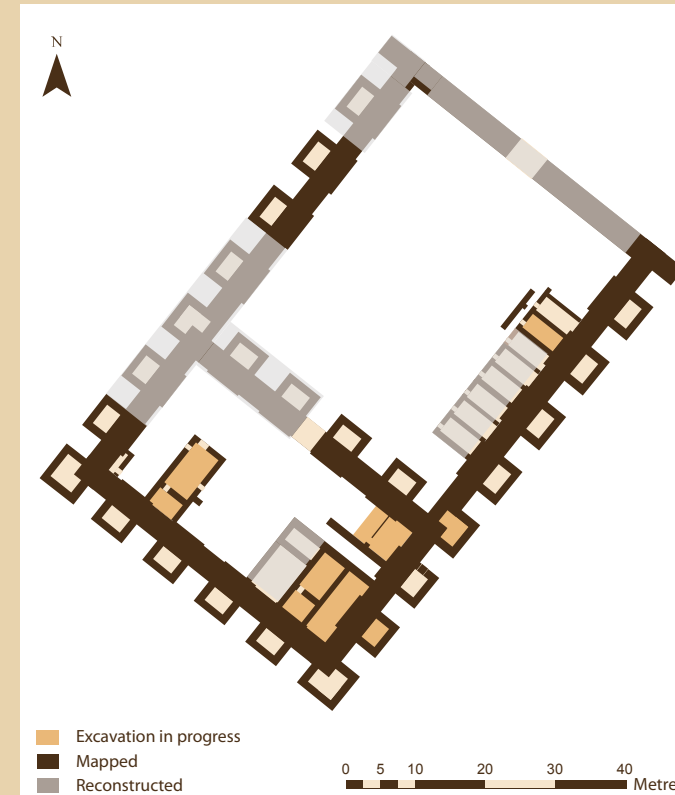
to be investigated, but work this year confirms that the southern third is rectangular, with a perimeter wall 3.30 m wide. On the corners, and at regular intervals along each side, are small rectangular rooms, forming a highly unusual ground plan, apparently unprecedented in Babylonia. Detailed analysis of the soils (micromorphology), when completed, as well as identification of doorways or other means of access, will help identify their original function. Our working hypothesis is that they were storage facilities for large quantities of grain.

At a later date, a large extension was built to the north, completing the plan as we see it today. This deliberately mirrored the earlier façade, continuing the arrangement of external rooms, and included a row of long, thin internal storerooms. The primary floor levels lie just below our current excavation limit, and will be reached in future work, but we know that the rooms were re-used as kitchens and perhaps animal stabling.

The best information about the original function of the building comes from the "tablet room". Preliminary readings of the documents found here suggest that Tell Khaiber was a major administrative centre where grain and other commodities were stored before shipping to the central authority. As well as stores, the public building would also have contained the offices of the bureaucrats, perhaps even of the local governor.

An unsuccessful rebellion of the southern cities against Hammurabi's son was put down with great ferocity, and some big cities may have been abandoned altogether. There would have been no central authority any more, to mandate and administer production of grain and other commodities. The change of use we observe in the building may reflect this turbulent time.

1. Schematic plan of the public building.
2. Brick pavement and adjoining tablet room during excavation.
3. External rooms of the building, perhaps granaries, with traces of plastered surface in foreground.



Research: the artefacts

Investigating the material culture of ancient Babylonia

Tools, weapons and personal items

Evidence for local economy and long-distance trade

The architecture of ancient buildings gives the first clue to their function, but the artefacts left inside get us closer to the people who lived and worked there. Sometimes there are many, sometimes few, but the quantity recovered in our operations this year surpassed all expectations: over 700 individual items, as well as around 60,000 fragments of pottery. This provides excellent potential for further investigation, and team member Daniel Calderbank has begun the first doctoral thesis on Tell Khaiber, studying the ceramic material.

Inside the public building, which we now know had an economic function, one room at least housed the archive of clay tablets. Another contained

evidence of many fragile clay models, including wheeled vehicles, a horse, other animals, human figures and enigmatic three-dimensional shapes. There was even a cylinder seal made of sun-dried clay. The design is a crude version of a standard Old Babylonian theme: a standing figure approaching a seated one (usually a god). But this is rendered in very simple scratched lines and the spaces in between filled with a bird and a pair of goats, suggesting it may have been an apprentice piece. Seals were used to authenticate or sign a document by rolling them onto the still-wet clay of the tablet.

The row of store-rooms in the northern section of the building provided the single most unexpected find: an object shaped like an eye, possibly a component of a statue. It is made from an early form of glass. This area also produced small-scale household items such as bone needles, polished shiny from heavy use, and a shell notched at the edge to form a simple saw. These date from the re-use of the

storerooms after their original function had ceased.

In another room, a fishing net had been discarded, evidenced now just from its many clay weights. Pounders and grinders of imported stone, and sickle-blades of flint testify to other industrial and agricultural practices being pursued at and around the settlement.

Private houses nearby contained tools and weapons of copper, also a copper mirror, illustrating the relative wealth of the people who lived in them. The grave of a woman in her late twenties had been dug into the corner of one room. She was buried inside a pair of large pottery jars, wearing two ornamental pins and a double-stranded necklace of over fifty semi-precious stones, all from distant lands and witness to extensive trading links.

1. Clay cylinder seal, height 22 mm.
2. Glass object, length 31 mm.
3. Copper spears, length 133–47 mm.
4. Fragment of horse figurine, length 55 mm.
5. Notched shell saw, length 37 mm.
6. Bone tools, maximum length 54 mm.



Research: science and archaeology

Portable spectrometer enables instant analysis of elemental composition

Thin sections reveal microscopic clues to room activities

The excavation of buildings and study of artefacts are the key steps to understanding an ancient settlement and its environment. Especially valuable is the information that can be recovered by examining the fine detail, often at microscopic level.

We carry out as much as possible of this detailed analysis while based at Ur, so that our Iraqi colleagues are involved too.

This year, we were able to discover the elemental composition of many of the artefacts by using a portable X-ray fluorescence spectrometer. This showed that the spearheads found were almost pure copper, rather than bronze, and that the cloak pins from the double-pot burial were an unusual alloy of copper and silver.

Other techniques, however, require laboratory facilities not yet available in Iraq, and in 2014 the SBAH kindly agreed to the export of samples of pottery, bone, plant remains and soil deposits for further work in the UK, after which they will be returned to Iraq. This availability of new material from southern Iraq is very exciting for the archaeological science community, and several specialists have already come forward and agreed to apply their particular techniques, mostly for the first time on Babylonian material.

Soil micromorphology is another technique we are using to look for microscopic clues about room activities. In this process, samples of the archaeological layers are impregnated with resin, and then cut and polished into thin sections 25–30 microns (millionths of a metre) in thickness. Examination under a microscope reveals traces of plants, minerals and other tiny pieces of debris. This technique can demonstrate, for instance, that grinding processes were being carried out, or show the

presence of textiles on the floor. Our samples will be prepared in Cambridge, for study at the University of Edinburgh.

Wet- and dry-sieving of deposits ensure that we recover as much bone and plant material as possible, as well as other small artefacts. This will provide new information on such topics as husbandry practices and diet.

Over 2,000 litres of soil from Tell Khaiber was wet-sieved, to float and collect botanical remains, and to recover micro-fossils. Preliminary identifications, counts and measurements of animal and fish-bone have already been completed. Samples for collagen and DNA analysis have been taken. Plant remains will initially be assessed at the University of Liverpool, and work on cereal DNA will be carried out at the University of Manchester.

1. Wet-sieving for plant remains provides vital clues to the ancient environment.
2. Dry-sieving of room deposits maximizes the retrieval of the smallest objects.
3. Many objects require specialised conservation treatment in the field.



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Research: the cuneiform documents

Archive of an Old Babylonian administrator

Inscribed bricks of King of Ur

Fourteen clay tablets were excavated this year, all found in the same room in the public building. More remain to be recovered, but as their fragile nature requires extreme caution in both excavation and conservation, including time to dry out at a controlled rate, and for cleaning and recording, they will be retrieved later. All but one are administrative documents, recording the official receipt and allocation of commodities.

The documents range from short notes to quite lengthy ledgers (the longest running to over a hundred lines). Some, inevitably, are missing sizeable portions, but others are fully preserved. The commonest type is a ledger recording either the issue or receipt of grain. The amounts vary from small quantities to hundreds of litres, and the

number of individuals receiving or contributing is large. The overall totals — which must have been quite hard to add up and keep track of accurately — were substantial.

Many of the individuals named in the tablets are identified by both given and family name, while in some cases a profession is mentioned instead. These include gardeners, carpenters and hunters/fishermen.

A different class of tablet deals similarly with flour, this time in smaller quantities. This is most likely to be flour delivered to the central institution, having been ground by the households of the individuals listed.

There is one practice tablet, with a single simple sign incised repeatedly. It could be a student's exercise, in which case the building must also house a scribal school, but as there are no other indications so far, it might just be the result of one of the recording officials testing his stylus.

So far none of the tablets mention the original place name of Tell Khaiber, and while two tablets have a date formula, they are not well enough preserved to read. We must wait a little longer for this information. However, an initial examination of the writing style and terminology used suggests a date around the time of King Hammurabi of Babylon (1792–50 BC) or shortly thereafter. One tablet mentions a palace, adding weight to the suggestion — not much in doubt — that the building was a state facility.

Parts of three inscribed bricks were also found, originally from an earlier phase of the settlement not yet investigated. One had the name of the king preserved, Amar Sin, who ruled Ur from 2044 to 2036 BC, demonstrating a connection between the settlement at Khaiber and this nearby capital city.

1. Broken half of clay tablet as found, with salt crystals on surface.
2. The same clay tablet after conservation, now re-united with its other half, 82 x 114 mm.
3. Brick inscription of King Amar Sin of Ur, maximum length 104 mm.



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Community

Enhancing the profile of Iraq's incomparable heritage

Showing that southern Iraq is a good place to work

The project continues to generate extensive media coverage. Articles appeared in the Iraqi national press and in regional Arabic newspapers, and one by Reuters News (*Despite Iraq's troubles, archaeologists are back*) was widely syndicated around the globe. Al Iraqiya, a satellite and terrestrial channel viewed by about 40% of the Iraqi population, broadcast a feature on the project, including interviews with the directors and staff. Jane Moon also appeared on the BBC World Service radio programme *Newsday*, which has an audience of 180 million.

This year visitors to the excavations increased. We were pleased to welcome, among others, H. E. Liwa Smeism, Minister of Tourism and Antiquities, Yahya Al-Nasiry, Governor of Thi Qar, Dr Ahmed Kamil, Director of Excavations and Exploration,

State Board for Antiquities and Heritage, and Mark Bryson-Richardson, Deputy Ambassador, British Embassy. From the local community of Badha we entertained a delegation from the Municipal Council, as well as a group of teachers, with whom we discussed ways we could organize visits for pupils in future.

In Nasiriyah we attended many cultural events and occasions, and project staff gave talks at venues including the College of Fine Arts and the Nasiriyah Cultural Centre. A visit to the splendid new campus of the University of Thi Qar started what both sides intend to be an ongoing relationship, especially as there is soon to be a Department of Archaeology there.

Circumstances in Iraq still make it more difficult than we would wish to travel freely around the country and to liaise with all the bodies and institutions we would like to, such as other universities. However, as awareness of our work grows, interested parties, particularly Iraqi students, are beginning to find us and to get in

touch. Social media are a major factor in this, and a Facebook page for Tell Khaiber started in January already has nearly one thousand fans, of whom 40% are Arabic-speaking.

In the UK, Jane gave a talk to the Humanitarian Dialogue Foundation, and this year the annual lecture of the British Institute for the Study of Iraq, held at the British Academy in London, will be about Tell Khaiber. At the invitation of our Italian colleagues, a public presentation on Tell Khaiber was given at La Sapienza University, Rome in May. We also gave a poster presentation at the 9th International Congress on the Archaeology of the Ancient Near East (ICAANE), which took place in Basel in June, with over 1,000 participants, and have been invited to address the 2014 Annual Meeting of the American Schools of Oriental Research, in San Diego in November.

1. Sheikh Zaid Nasir Al-Shahad hosts lunch for the team, cementing our relations with the local community.
2. Schoolteachers from Badha visit Tell Khaiber.
3. Facebook and other social media are important channels of communication for many Iraqis.



Looking forward

Building capacity among Iraqi professionals

Engaging the international scientific community

This year's work has confirmed the importance of Tell Khaiber, and points us in directions for the future. The place is now of undeniable research significance. In particular, the discovery of an economic archive actually in its architectural context, which can be examined in a controlled scientific manner, promises a wealth of information about southern Iraq at one of the crossroads of its history.

Now we can push forward and consolidate engagement with appropriate specialists, extending our links with other institutions both in the UK and beyond. Manchester, York, Liverpool, Edinburgh, and University College London are already involved, and we are collaborating with our colleagues at Roma La

Sapienza University to pool and maximise resources. The facilitation by the SBAH of temporary export of scientific samples has opened up exciting new research possibilities, such as DNA and collagen analysis. Iraq's archaeology is fast emerging from a dark age into one where cutting edge techniques are becoming accessible.

Research, as we constantly stress, is the core purpose of the project, but by no means its only one. Building the capacity of our host country to manage and make the most of its unique heritage is fundamental: as the Governor points out, Iraq's legacy is that of all mankind, and it needs looking after for the long-term. We are already providing on-the-job training for three local archaeologists, and we now aim to expand this operation to include new recruits to the heritage sector, and students. This will be an extra challenge, not least to our funding, but one we believe is worth taking on.

Communication is the keystone to all facets of our work, both in Iraq and internationally. The time between field seasons is devoted not just to research, and preparation for next year, but also to writing articles and reports, to talks, lectures and seminars, to raise awareness of Iraq's importance. By doing so, and showing that, despite everything one hears, southern Iraq is a great place to work, we hope that more international teams will be encouraged to return to the Cradle of Civilization and share their expertise with our Iraqi colleagues.

The next round of excavation at Tell Khaiber is planned for January to March 2015, dependant on funding. We are especially grateful to our benefactors who commit to annual support, but we still need to expand and consolidate our funding base. For updates, please visit the project web site and Facebook page, and follow us on Twitter (details opposite).

Ur Region Archaeology Project

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