



# THE NEAR EASTERN ARCHAEOLOGY FOUNDATION BULLETIN

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## Jebel Khalid on the Euphrates River

Jebel Khalid is located on the west bank of the Euphrates River in northern Syria. This section of the Euphrates River, known as the 'Great Bend', has been strategically important for millennia. It was here, as related in the Egyptian chronicles, that the Pharaoh Thutmose III campaigned in the Late Bronze Age and it was here, in the early Hellenistic period that a garrison town was laid out to protect and control a section of the Euphrates where the river was hemmed in by steep cliffs. Importantly, the site of Jebel Khalid was unoccupied prior to the Hellenistic building program and it was largely abandoned during the Hellenistic period giving archaeologists a perfect opportunity to investigate a purely Hellenistic settlement. Since the 1980s the task of slowly uncovering the remains of Jebel Khalid has fallen to an Australian team led by Professor Graeme Clarke, Dr Heather Jackson and NEAF's President, Dr John Tidmarsh. In April/May of this year excavations continued at the site and the team were joined briefly by members of NEAF's tour to Syria when the site's directors kindly gave the NEAF members an in-depth tour of the site (along with a great lunch in the local village where the team stays). What follows is an abbreviated report by the excavation directors as they take us through the results of their 2008 field season.

### AREA C (?Palaestra)

#### Professor Graeme Clarke

Work in the 2000 season (Meditarch 13, 2000, p.123) and the 2006 season (see Jebel Khalid 2006 Fieldwork Report, Meditarch 21, 2008, forthcoming) had together revealed the presence of a colonnaded building, on an alignment with the Jebel Khalid Temple but some 125m to its north, in a very central location within the



*A view from the acropolis area of Jebel Khalid across the Euphrates River (artificially enlarged by modern dams).*



The Near Eastern Archaeology Foundation was established at the University of Sydney in 1986 to promote research into the archaeology of the Middle East and North Africa. Activities include educational programmes, study tours, residential weekends, and an annual dinner. Support for research is through travel grants, fellowships, publication subsidies, and field programme finance.

NEAF: SOPHI, A14 University of Sydney NSW 2006 ([sophi.neaf@usyd.edu.au](mailto:sophi.neaf@usyd.edu.au))  
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*Professor Graeme Clarke shows NEAF members around the site of Jebel Khalid in early 2008.*

settlement of Jebel Khalid. Previous excavation had revealed a north/south stylobate, 17.5m in length, with foundations for 8 columns, the corners consisting of massive cordiform ("heart-shaped") columns. A short length of stylobate had also been cleared on the adjoining north E/W arm in the 2000 season and in the 2006 season on the adjoining south E/W arm the supporting piers for two columns were cleared to bedrock.

It was decided that in the 2008 season the full length of the south arm should be cleared: this should clarify both the length of the colonnade on the south side (and therefore probably on the north side as well) of this public building and determine whether the building was a pi-shaped Stoa (as Clarke wishfully maintained) or whether it was peristylar (as the sage Tidmarsh insisted that it was going to prove to be). Accordingly four trenches were opened in 2008 with the following results:

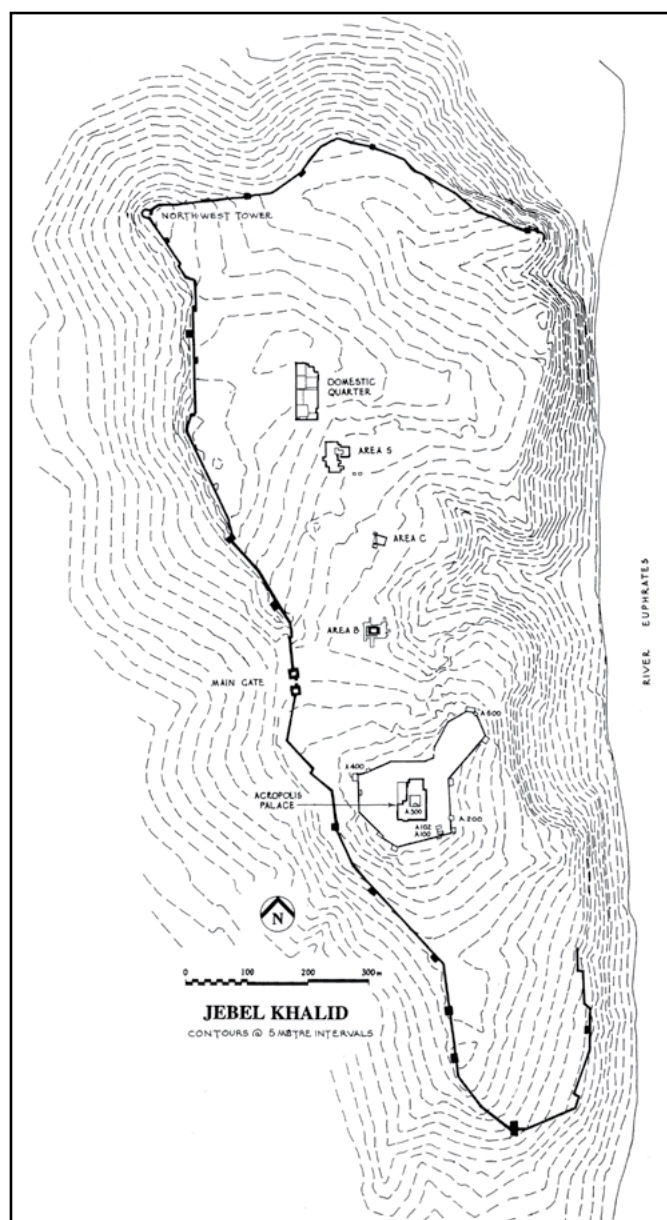
Like the north/south stylobate, this southern east/west stylobate is also 17.5m in length and also consisted of eight columns, each 2.35m apart (measured interaxially). Residual column bases were found in situ for all but one of the columns, sitting on square plinths, and with massive supporting piers going down in most cases some 2.5m-3m to bedrock. The plain residual column bases imply that the order was Doric. The bedrock cuttings clearly showed that the site had first served as a quarry and then had been subsequently built up with layer upon layer of limestone chippings from the quarrying operations to create the floor level. The final column along this stylobate at its western end (uncovered on the very last day of the dig, of course, in the very middle of the present road on the site!) consisted of two heart-shaped column drums still sitting on their square plinth identical in dimensions with the corner cordiform drums on the north/south stylobate. The implication is clear – and Tidmarsh was right! The building must be peristylar rather than pi-shaped. As Dr Nixon remarked: "The Life of Pi was short-lived at Jebel Khalid".

Whilst the fill below the floor of the colonnade consisted

largely of sterile limestone chippings, Three diagnostic black-gloss sherds were recovered this season right on the bedrock. Dr. John Tidmarsh reports on their dating: "Two of the fragments (rim, floor) are part of same Attic vessel - a bowl with outturned rim. Shape and glaze and stamped palmettes are consistent with a date in first quarter of 3rd century BCE (probably c.290-275). The third fragment base is non-Attic (Antioch fabric) but its date is consistent with the above." This accords with the five Attic sherds recovered in the 2006 excavations in a parallel context and further confirms a third-century BCE construction date for the building.

The courtyard floor consists of levelled bedrock with a very hard packed clay overlay. Embedded in this overlay was coin 08.312, identified as dating to Seleucos II [246-225 BCE], and helping to confirm the third-century construction period.

Secondary use of the building was everywhere apparent, with massive architrave blocks, c. 2.5m in length, re-used in secondary walling, likewise column drums (of a variable





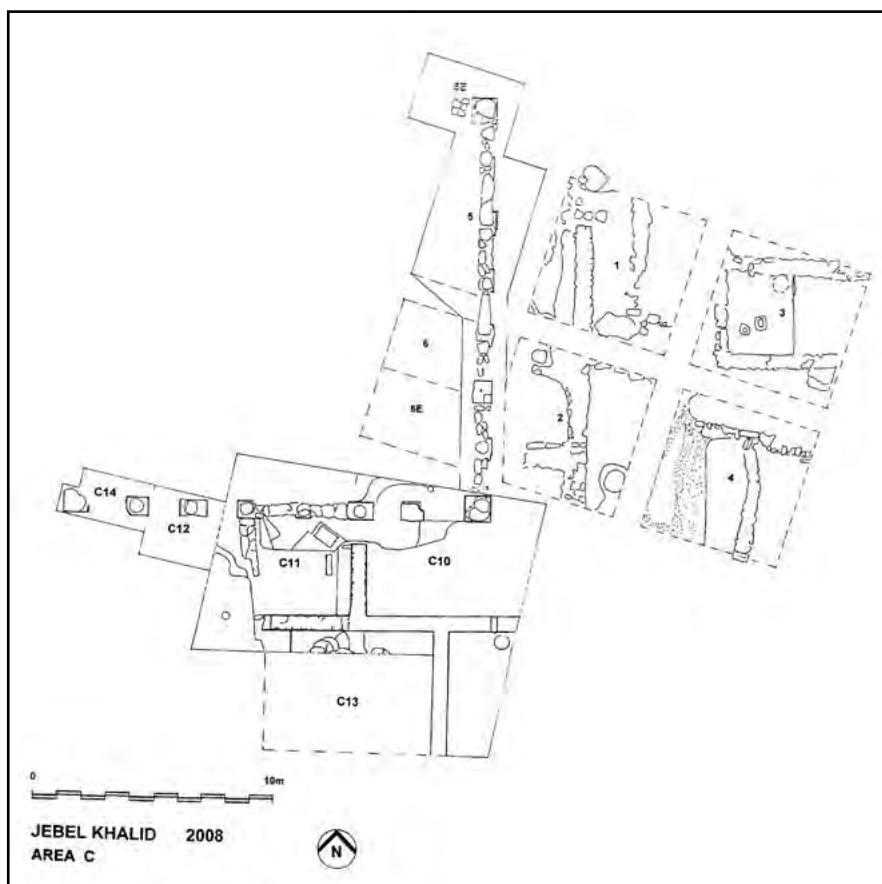
diameter of c. 65~75cm) – a further 11 unfluted drums, with chamfered edges, were recovered this season (showing some traces of plastering): a series of weak secondary fieldstone walls, running north/south, sitting on soil, subdivided the original colonnade on its south side.

Whilst it is clear that rooms opened off the colonnade (it is 4m deep) on this south arm the full dimensions of these rooms are yet to be determined - and whether any further rooms possibly opened beyond.

Little in the way of artefactual objects was recovered though a fragmentary strigil and a stone ball (limestone) are noteworthy (five lamp fragments recovered all belong to the course of the second century BCE). The pottery produced few fine wares or domestic wares (not one figurine fragment) and largely consisted of jugs, jars (at least 72), deep bowls (24), amphoras (17) - for the provision of oil?- and a noticeable collection of large water jars with pitched interior, a number of which were left in situ within the colonnade, still sitting in circular stands cut into the bedrock. The users of this area got very thirsty. This is not a domestic assemblage. The only feature uncovered is a large circular limestone basin set into the floor in one of the interior rooms opening off the southern arm of the colonnade (a *loutron*?).

Further work is required to verify the full lay-out of this important public building, especially on the north side of the court where traditionally a deeper (more sheltered) wing is to be found (cf. Vitruv. 5.11.1f.), but the most plausible conclusion is that Area C has produced a palaestra, with a central courtyard 17.5m square surrounded by a colonnade of 28 columns. So far as I am aware this is the first Hellenistic palaestra so far discovered in Hellenistic Syria – and illustrates, once more, the early high ambitions for the site entertained by the founders of Jebel Khalid, with the provision of a Greek-style combined physical training (especially for the contact sports of boxing and wrestling) and educational facility.

Finally, on behalf of the Excavation Directors I would like to thank all who helped make the 2008 season such a success. In particular we give our appreciation to the Syrian Directorate General of Antiquities and Museums, to its Director General, Dr Bassam Jamous, to the Director of Excavations, Dr Michel el Maqdissi, and to our Representative, Mr Hikmat Awad (Homs). Thanks to Dr. C. E. V. Nixon for the analysis of the coins. Area C plan by Barry Rowney.



*Plan of the 2008 trenches in Area C, Jebel Khalid.*

## THE ACROPOLIS

**Dr John Tidmarsh**

In 2006, three plots were laid out on the southern extremity of the Acropolis (to the south of the Governor's Palace) to investigate a series of long, narrow structures, visible on the surface, which ran north-south and seemed to abut the south wall of the Acropolis. These structures appear to have been associated with the Acropolis fortifications and thus were possibly arsenals, storerooms, or barracks.

By the end of the 2008 season the structures in all three plots had been substantially delineated although further exploration to the east of the current plots is necessary for completion.

The 2008 excavations have confirmed the existence of four main phases of occupation. Phase II was represented by two large rooms (Rooms II.1 and II.2), constructed on bedrock and with floors of tamped earth, along with an adjacent courtyard (II.3). Room II.1 did not extend to the southern wall of the Acropolis but opened into an east-west corridor (c.2m wide) to its south. Although very little pottery or other artefacts were recovered from the corridor, its tamped earth and thin plaster surfaces were clearly earlier than Rooms II.1 and II.2; thus the corridor, which may have been in use from the time of the construction of the Acropolis wall in the 3rd century BCE, should be assigned to Phase I.

The second room, Room II.2, lay to the north of Room II.1; east of Room II.2 was a courtyard (II.3) with a thick plaster floor, tannur, two small plaster-lined storage bins and, in the south-west corner, the remains of a larger stone-lined



*Dr John Tidmarsh shows off the recently discovered flute.*

bin. The courtyard was entered from the north.

The walls of this Phase II structure were all of fieldstone, some 20 to 50cm in length, and lacked the careful workmanship seen in the adjacent Governor's Palace. On the other hand, the rooms were of quite large dimensions

and the whole complex may well represent the residential quarters of important officials or guests.

Following the 2006 season it was suggested that the chronology of Phase II should be assigned to the late 3rd or early 2nd centuries BCE; the coins recovered from the Phase II deposits in the 2008 season support this chronology, with all dating to the reign of Antiochus III [223–187 BCE].

Overlying the Phase II levels in all three plots was a thick homogeneous layer of ash, burnt animal bone, pottery (predominantly, but not exclusively, common ware), and numerous iron nails. This layer had been encountered in 2006 and interpreted then, as now, as a fill or clearing deposit rather than an occupation or destruction level. The deposit was thickest in plot 102, the plot closest to the Governor's Palace. This fact, along with the dates of the stamped amphora handles, lamps, and coins from the deposit—as well as the presence of Eastern Sigillata A pottery—suggested that it was laid down over much of the 2nd century and into the early 1st century, probably as the result of continual dumping of rubbish from the Governor's Palace on the summit of the Acropolis further to the north. From within this rubbish deposit were also recovered moulded ("Megarian") bowls of high-quality, a fragment of millefiori glass, and part of a worked bone flute, or αὐλός; these objects give us some insight into those evenings of feasting and music which were an important part of Greek culture throughout the Seleucid realm.

Towards the end of the 2nd century BCE the Phase II walls were almost completely dismantled and replaced by four north-south fieldstone walls as well as a more substantial east-west wall (Phase III). Two of these north-south walls used as their foundations the lower courses of Phase II walls. The Phase III north-south walls appear to run right up to, and abut, the southern wall of the Acropolis, form-

*Room II.2 had a thick plaster floor; tannur; two small plaster-lined storage bins and, in the south-west corner, the remains of a larger stone-lined bin.*





*Dr Heather Jackson stands within the Area S at Jebel Khalid in front of one of the many ovens excavated in this area.*

ing at least one narrow chamber suggestive of a storeroom or arsenal (although no definite evidence of either has so far emerged).

The remains of a flimsy east-west wall and a further tan-nur (constructed from a broken pithos)—both uncovered in plot 101—represent late Hellenistic squatter activity (Phase IV) also seen in the Governor's Palace and Domestic Quarter.

## AREA S

**Dr Heather Jackson**

Area S, perhaps a commercial area, is located on flattish land at the top of a path up the ravine from the river Euphrates, i.e. a convenient position for the portage of goods to and from river transport. The colonnade of a large public building facing east onto an apparently empty space had been found in previous excavations (1989-1993) but no complete picture had emerged either of the boundaries of that building or the surrounding building complex. The 2006 campaign re-opened excavation in this area and made some progress towards defining the complex to the north and west. This year (2008) we have established the northern and western boundaries, which enclosed the complex apparently without access on those sides. The western boundary wall acts as a retaining wall for a road

leading to the Housing Insula. The northern boundary wall, a thick double one with a drain on the exterior, lies almost across the mouth of a stone quarry, which was probably used for the building of walls here and in the Housing Insula: all the walls are of stone and not of mud brick, at least on the ground storey.

Inside this enclosure to its south is the building with the colonnaded front, which contains some originally very large rooms (subdivided in later phases), an inner courtyard and steps to an outer court facing east. A long N/S wall appears to divide it from a different complex to the north, which contains a row of symmetrically sized and placed large rooms opening into one another. These are neither shops nor domestic rooms – could they have been the offices of river transport officials or companies? A deep, rectangular pit cut in the bedrock in one room could have had an industrial use. The only domestic features found were several ovens but these largely belong to the third and last phase when a squatter-type settlement was in residence.

The 2008 team also excavated further east towards the river. Here a N/S street was found, probably serving the quarry. This area produced, on either side of the street, a maze of primary, secondary and tertiary walls, reflecting the three main phases of occupation. One room (T36) was used as a dump in the later 2nd century BCE, the date attested by a stamped amphora handle and several lamps from that period. A significant find in the same room was an Egyptian amulet of faience. Another highlight was the discovery of a fragmented wine press and stone vat, *ex situ*, in the courtyard area to the east of the colonnaded building. This indicates wine-making but not necessarily on a commercial scale. The function of Area S is still uncertain.

*Excavation underway in Area S at Jebel Khalid.*





# NEAF GRANT REPORT

## *Ceramic characterization and inter-site relationships in the northwestern Central Plateau, Iran, in the Late Neolithic to the Bronze Age*

by Edna Wong (Doctoral candidate, University of Sydney)

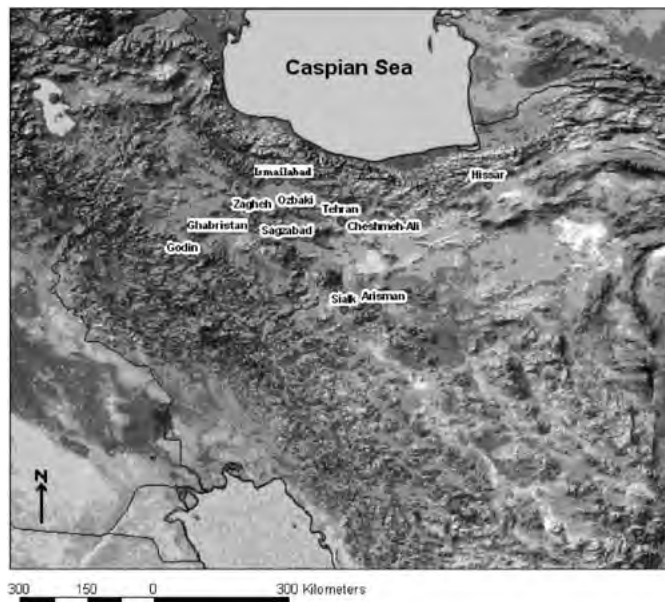
Despite its geographical importance as part of the Silk Road in later history, the Central Plateau in northern Iran has received relatively scant attention. This region has held a prominent place in Iranian cultural, technological and political development as a consequence of its geographical position, acting as it were a bridge linking Mesopotamia and Central Asia, with a number of settlements dating from the Neolithic to the historic period. With a few recent exceptions, the syntheses of cultural development in this region, as with most areas in Iran, have been predominantly based on stylistic study of pottery.

In the last decade, evidence from the re-excavation of the key sites of Cheshmeh Ali, Zagheh and Ghabristan, new excavation at the site of Ismailabad and surface surveys on the Qazvin Plain has prompted a dramatic re-evaluation of the prehistory of this region. The discovery of a number of new sites, ranging in date from the Late Neolithic to the Bronze/Iron Age, from these projects has added to the scope of reassessment of the archaeology in this region. Theories and dating resulting from stylistic studies undertaken in the 1970s by scholars such as Majidzadeh and Malek Shahmirzadi have been challenged and new dating and periodization substantiated by radiocarbon samples taken from secure contexts in multiple trenches in the re-excavations have provided a more solid foundation for the study of the ceramic industry in the late prehistoric period.

The primary objective of this thesis is to approach the study of ceramics using an integrated approach employing methods derived from the physical sciences to provide a different perspective into the characterization of the different wares with the aim of gaining further understanding into the process of production and investigating into the origins of the raw materials used in the production of these and other contemporary ceramic wares.

Two main approaches are used in this thesis: bulk chemical compositional analysis using Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) and Inductively Coupled Plasma Mass Spectrometry (ICP-MS) and mineralogical analysis examination of thin sections of the ceramics samples using the petrographic microscope. The chemical analysis is used to detect minute variations in the process of assessing provenance, while thin section petrographic analysis provides data about the mineralogy of the ceramic samples and technological information such as identification of temper additives and mode of production.


Of special interest in this study are the Cheshmeh Ali



*Map showing major archaeological sites in the Central Plateau, Iran.*

ware in the Transitional Chalcolithic period (5300–4300 BCE) and the grey ware in the Middle/Late Chalcolithic period. The fine black on red painted Cheshmeh Ali ware has been found in sites across northern Iran, from the Gorgan plain in the east to the Qazvin plain in the west, prompting Voigt and Dyson to suggest that it could be “used to establish a horizon style within western and northern Iran”. It has been postulated that the clay was imported for the manufacture of these vessels in the Qazvin Plain since the clay used was different from the local clay source. Were these vessels produced locally or in centres of production and exported? The grey ware in the Middle/Late Chalcolithic period first described by Majidzadeh was postulated to represent migration of unknown population who brought in the new ceramic tradition. The distribution of this particular ware is restricted to the Qazvin Plain and the northern Tehran plain in contrast to the Cheshmeh Ali ware in the Transitional Chalcolithic period. There is no evidence of similar ware found elsewhere in Mesopotamia, Anatolia or other parts of Iran before or during this period. Finally there is the question of the settlement collapse in the Central Plateau at the end of the Late Chalcolithic period. Was it due to invasion of the Kura Araxes culture from eastern Anatolia as some scholars believe or were environmental changes the deciding factors? Clearly, the answers for these questions need to be sought from other perspectives rather than from stylistic approach alone.

The material for analysis in this thesis has been collected from the excavations of Zagheh in 2001, Ghabristan in 2002, Ismailabad in early 2003, the survey of the Qazvin



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## THE NEAR EASTERN ARCHAEOLOGY FOUNDATION

The aim of the Near Eastern Archaeology Foundation at the University of Sydney (NEAF) is to facilitate research in the archaeology of the Near East, Egypt and Cyprus, and to bring the world of Near Eastern archaeology to the general public.



The 2007 excavation team at the site of Pella in Jordan: a NEAF sponsored volunteer program.

The Near Eastern Archaeology Foundation allows people who would have little or no

If you haven't already done so, please have a look at the Near Eastern Archaeology Foundation's new web site. Apart from news items that will be of interest to NEAF members, the site also contains notices of forthcoming NEAF lectures, NEAF tours and NEAF publications.

At the site you will also be able to find information on NEAF sponsored excavations such as Pella in Jordan and information on NEAF's Grants in Aid which are given out each year to archaeology students from around Australia and New Zealand.

If members would like to contribute a news story (a report on a recent trip to an archaeological site or a museum - or your experiences at Pella or any other university excavation), we would like to include it. Please email it, along with any photos to: [sophi.neaf@usyd.edu.au](mailto:sophi.neaf@usyd.edu.au).

The website can be found at: [www.acl.arts.usyd.edu.au/neaf](http://www.acl.arts.usyd.edu.au/neaf)

plain in late 2003 and supplemented by further visits to the sites in 2006. The data is further supplemented by ceramic material recovered from an old trench in Cheshmeh Ali in the early 1970s, generously supplied by Dr Maurizio Tosi. In total, 220 sherds from thirteen sites were studied and the chemical results were compared to those obtained from the neighbouring Tehran plain.

The results of the investigation have been illuminating and opened up new areas of investigation, especially in the study of Bronze Age ceramics. In the Transitional Chalcolithic period the petrography of the Cheshmeh Ali ware shows remarkable similarity across all the sites in the Qazvin plain and that of the type site of Cheshmeh Ali in the neighbouring Tehran plain but discriminant analysis on the chemical content of these sherds was able to show clustering into their relative find spots, suggesting discreet site based production rather than production from central location(s).

The petrography of the grey ware in the Middle/Late Chalcolithic period has not shown any departure of production tradition of the Central Plateau. In conjunction with the evidence that it co-existed with painted fine wares of both the Middle and Late Chalcolithic periods with gradual increase in numbers from the late Middle Chalcolithic period into the Late Chalcolithic period argues against the migration/invasion theory. More importantly, there is no parallel found in Anatolia or Mesopotamia either in preceding or contemporary period. Hence, all the evidence supports the theory proposed in my honours thesis that the Middle/Late Chalcolithic grey ware was a local innovation.

An unexpected but very interesting observation emerged in the petrographic examination of the grey ware of the Bronze Age. Up till now there have been very few Bronze Age sites found in the Central Plateau. The collapse of the late Chalcolithic settlement has been postulated by some scholars to be due to the migration of the Kura Araxes culture into the Central Plateau of Iran. This was based on the discovery of Kura Araxes pottery types in recently uncovered Bronze Age sites. It has been shown in Godin Tepe in the Iranian Zagros mountains and elsewhere in eastern Anatolia that a high proportion of Kura Araxes pottery contains grog temper. In the context of Godin Tepe, this is a definite departure from the tradition of pottery making in the previous and subsequent periods. It has been suggested that while stylistic attributes might be copied without a significant movement of people, the introduction of such a new technological development might be considered a clearer indication of new individuals arriving in a region. In the samples obtained from the survey of the Qazvin plain, no convincing evidence of grog temper was found. On this evidence a larger sample should be collected from excavated contexts to substantiate the theory of population movement. If it can be shown that the production tradition has not changed, the parallels might be due to stylistic diffusion. This scenario is not surprising since ceramic parallels with Godin Tepe have already been attested since the Early Chalcolithic period.

This project succeeds in clarifying some issues that have been unresolved since the 1970s. It also offers scope for further investigation into current issues that concern population movement in the wider area of Transcaucasia and Iran in the Early Bronze Age.





## TOURS IN 2009



### JORDAN & SYRIA: Crossroads of civilisation

with Dr John Tidmarsh: 1-28 April 2009

For thousands of years, Syria and Jordan controlled the inland caravan routes along which goods were transported from the Orient to the Mediterranean. From the Nabataeans in their stronghold at the 'rose-red city' of Petra to the merchants in the bustling markets of Aleppo, the region has a rich and fascinating history, having been inhabited over time by several civilisations, each of which has left its individual mark.

This comprehensive tour led by an archaeologist who works in both Jordan and Syria will be a delight for anyone who has an interest in history, archaeology or the dynamic cultures of this part of the world.

All enquiries:

**Lissa Sharp at 9036 4766 (The Centre for Continuing Education, University of Sydney). [l.sharp@usyd.edu.au](mailto:l.sharp@usyd.edu.au).**



### Iran The Majesty of Persia

with Ben Churcher: October/November 2009

Following NEAF's two successful tours to Iran in 2006 and a follow-up tour in 2007, we thought it was time that we again offered this incomparable destination to our readership.

This tour to Iran will encompass the very best of what the country has to offer. Along the way we will walk in the footsteps of Elamites at Susa and Choga Zanbil, of Medes at Hamadan (ancient Ecbatana) and of Persians at Persepolis and Pasargadae. We will also enjoy visits to the splendid cities of Shiraz and Isfahan. As we do so we will be stunned by the awe-inspiring scenery of the Zagros Mountains with its steep peaks, rushing rivers and lonely religious centres such as Takht e-Sulieman. At Yazd we will see the lingering influence of Zoroastrianism and at a dozen villages and cities we will feel the genuine warmth and hospitality of a sophisticated and cosmopolitan nation. Join us for an unforgettable journey into the very heartland of Eurasia.

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