

## Mesopotamian Environmental Archaeology Database: phase I Iraq

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### Introduction

The aim of the project is to produce an updateable electronic database of environmental archaeological (animal bone and plant remains) evidence for all archaeological sites in Iraq that have yielded such material. The database is a flexible and easily accessible resource which those working in the field can both use and contribute to as and when more data become available.

The project was divided into two phases (see below) and funding for the first phase, which is reported on here, has been provided by the British School of Archaeology in Iraq:

- Phase 1 is an updateable electronic database, available via the Web, of environmental archaeological evidence recorded in a semi-quantitative format (presence) from sites in Iraq.
- Phase 2 will add quantitative data for each site on a sample-by-sample basis and will assess the environmental archaeological record for Iraq in the light of recent developments in the fields of archaeobotany and archaeozoology.

### Phase 1. Preliminary database of environmental archaeological remains recovered from sites in Iraq for all periods

#### *Background to the project*

Systematic recovery of environmental remains from archaeological sites in Iraq became a regular, though not uniform, component of archaeological excavation by the end of the 20<sup>th</sup> century. With the cessation of new excavation much of that material has now been analysed at least in a preliminary fashion. With the development of new techniques to address basic archaeological questions it is appropriate to produce a record of the work that has already been carried out and to assess work that has been undertaken in the fields of environmental archaeology and palaeoeconomy in the region, to make these data available to a wider audience and to suggest research priorities for the future.

Existing data reviews of archaeozoology for the Near East include Uerpmann (1986), Hours *et. al.* (1994 referred to here as ASPRO) and Anastasio (1995). They are limited, however, by their extent of recording (i.e. Hours *et. al.* and Anastasio *loc. cit.*) or by their specificity (e.g. Uerpmann *loc. cit.*, with data relating only to the presence of wild ungulates). To date, the main synthetic archaeobotanical review of data for the Near East has dealt only with the major crop plants for a limited number of sites (Miller 1991). Miller also maintains a bibliography of site reports on her web-site (Miller website) but does not present any data. Although useful pieces of work, none of the reviews mentioned have been produced with a view to data manipulation or to updating as new sites, assemblages and data become available. Such a publication lends itself to presentation in electronic format, where datasets can be queried in a wide range of forms and distribution maps created depending on the requirements of the user. For an example of such an interactive use of environmental data, see Tomlinson and Hall (1996).

The phase of the database presented here is based on a review of published data and includes essential details of sites and their archaeobotanical and archaeozoological assemblages recorded in a semi-quantitative manner (the presence of major categories of remain) by period. The following sections provide keys to the data table contained in the database

## MEAD Phase1 Explanation and keys to archaeobotanical tables

### Description of tables

#### 1) Site location

The name (ancient and modern) and geographic position (latitude and longitude) are given for the sites recorded in the database. Where available site name and its map reference have been taken from Roaf (1996)<sup>1</sup>. Where these details are not available the information has been garnered from a range of sources including the original publication, other encyclopaedias etc. These sources are indicated in the table.

#### Key to site location - data contained in the site location table

<b>column heading</b>	<b>explanation</b>
<i>site code</i>	A 4 letter site code based on the first letters of the main part of the modern name. Generic prefixes such as, Abu, Tell and Umm have been left out. The exceptions to this occur where: <ul style="list-style-type: none"> <li>- the main name is less than 4 letters long - in these cases the first letter of the preceding prefix is added at the beginning of the code (e.g. Tell ed-der becomes EDER)</li> <li>- sites have the same name – here a suffix has been added to separate the sites (e.g. Yar1 and Yar2 for Yarym Tepe I and II).</li> </ul>
<i>modern site name (following Roaf 1996)</i>	commonly used modern name formatted after Roaf (1996) i.e. Pre-fix 1, Pre-fix 2, Main name.
<i>modern site name (following ASPRO 1994)</i>	commonly used modern name formatted after ASPRO (1994) i.e. Main name, Pre-fix 1, Pre-fix 2.
<i>ancient site name (following Postgate 1992)</i>	commonly used ancient name based on Postgate (1992).
<i>Name used in original report</i>	the site name used for in the original report.
<i>latitude and longitude</i>	grid map references of the site (latitude and longitude).
<i>map ref source</i>	source of map reference: <ul style="list-style-type: none"> <li>- Roaf = Roaf (1996)</li> <li>- Postgate = Postgate (web site 2003)</li> <li>- site = site report</li> <li>- site estimate = site location based on estimates from maps.</li> </ul>
<i>biblio code</i>	references related to site i.e. author name and suffix, year.

<sup>1</sup>Tell Bazmosian, as named in the database, seems to equate to Bazmusiyan in Roaf (1996).

#### 2) Bibliography

This table contains archaeobotanical reports used to generate the scores section of the database

#### Key to bibliography table - reference details for reports used in the plant database

<b>column heading</b>	<b>explanation</b>
<i>biblio code</i>	as in Table 1

<i>full reference</i>	full reference for report
<i>site code</i>	as in Table 1

### 3) Chronology

Each record in the database has been given an amalgamated period code. This is based on the dates used in the original report have been converted into an eleven point scale extending from 14,000 BC to AD 1900. The principal sources for the dates and names of the chronological periods are Postgate (1992) and ASPRO (1994), other sources used include Anonymous (1987) and Leick (1999).

Key to chronology - list of chronological periods used in the database

<b>amal per</b>	<b>BC calib</b>	<b>Period name and dates</b>
1	14000-12000	Geometric Kebaran, Moschabian - Zarzian
1	12000-10200	Natufian, Late Zarzian
1	10200-8800	Proto-Neolithic, Pre-Pottery Neolithic A (PPNA) - Khiamian, Sultanian - Harifian
1	8800-7600	Early and Middle Pre-Pottery Neolithic B (PPNB)
1	7600-6900	Late PPNB
2	6900-6400	DFBW, Catal Huyuk, Umm Dabaghiyah, Sotro - Obeid 0
2	6400-5800	Hassuna, Samarra - Halaf, Obeid 1
2	5800-5400	Pottery Neolithic A (PNA) - Late Halaf, Obeid 2
2	5400-5000	Pottery Neolithic B (PNB) - Obeid3
3	5000-4500	Obeid 4; Ubaid
3	4500-4000	Ubaid
4	4000-3200	Uruk
4	3200-3000	Jemdet Nasr
5	3000-2750	Early Dynastic I
5	2750-2600	Early Dynastic II
5	2600-2350	Early Dynastic III
6	2350-2150	Akkadian
6	2150-2000	Ur III
7	2000-1800	Isin Larsa
7	1800-1600	Old Babylonian
8	1600-1155	Kassite/Middle Babylonian/Middle Assyrian
9	1000- AD 600	Neo-Assyrian/Neo-Babylonian/Parthian/Sasanian
11	AD 7th-19 <sup>th</sup> cent	Islamic (600-1900 A.D.)

#### 4) Site scores - archaeobotany

Phase 1 of the database includes macro-fossil plant remains of fruits, seeds, grain and chaff. The commonest form of preservation of these remains in Iraq is by charring, though there was a substantial amount of early research by Hans Helbaek on the impressions of these remains preserved in pottery (Jacobsen, 1982). The plant remains have, for the 1<sup>st</sup> phase of the database, been grouped into broad categories (e.g. barley grain, barley rachis etc.). The presence of these categories is given by site, period and preservation type.

Phase 2 will involve a re-appraisal of the original identifications in the light of subsequent archaeobotanical work. It will also include other types of plant remain such as wood charcoal and pollen.

Key to site scores:

##### a. site and sample details

column heading	explanation
<i>site code</i>	as above.
<i>biblio code</i>	references related to site i.e. author name and suffix, year.
<i>amal per</i>	amalgamation period - period assigned to samples based on ASPRO (1994).
<i>presv</i>	preservation - type of preservation of plant material cpr = charred plant remains cpr/p = charred plant remains in plaster imp/p = imprint in pottery imp/m = imprint in mud.
<i>no. samp</i>	total number of samples (per site/period/preservation type).
<i>divrs</i>	number of categories of plant remain (per site/period/preservation type).

##### b. categories of plant remain recorded

categories of plant remain	category in full	latin name (where appropriate)
<b><i>cereal chaff</i></b>		
barley rachis	barley rachis internode	<i>Hordeum sativum</i>
culm nodes	culm nodes	
f-t wheat rachis	free-threshing wheat rachis internode	<i>Triticum aestivum/durum</i>
gw glume bases	glume-wheat glume bases	<i>Triticum monococcum/dicoccum /spelta</i>
wheat indet rachis	wheat indeterminate rachis	<i>Triticum sp.</i>
<b><i>cereal grain</i></b>		
cereal indet grain	cereal indeterminate grain	
barley grain	barley grain	<i>Hordeum sativum</i>
f-t wheat grain	free-threshing wheat grain	<i>Triticum aestivum/durum</i>
gw grain	glume-wheat grain	<i>Triticum monococcum/dicoccum /spelta</i>
millet	millet	<i>Panicum sp.</i>
oat grain	oat grain	<i>Avena sp.</i>
wheat indet grain	wheat indeterminate grain	<i>Triticum sp.</i>

wild einkorn	wild einkorn	<i>Triticum boeoticum</i>
<b><i>oil/nut &amp; fruit</i></b>		
caper	caper	<i>Capparis spinosa</i>
cucumber	cucumber	<i>Cucumis</i> sp.
date	date	<i>Phoenix</i> sp.
fig	fig	<i>Ficus carica</i>
grape	grape	<i>Vitis</i> sp.
hazelnut	hazelnut	<i>Corylus</i> sp.
olive	olive	<i>Olea</i> sp.
pear	pear	<i>Pyrus</i> sp.
pistachio	pistachio	<i>Pistacia</i> sp.
pomegranate	pomegranate	<i>Punica</i> sp.
flax/linseed	flax/linseed	<i>Linum</i> sp.
sesame	sesame	<i>Sesamum</i> sp.
<b><i>pulses</i></b>		
bitter vetch	bitter vetch	<i>Vicia ervilia</i>
celtic bean	celtic bean	<i>Vicia faba</i>
chickpea	chickpea	<i>Cicer</i> sp.
common pea	common pea	<i>Pisum</i> sp.
grass pea	grass pea	<i>Lathyrus sativus</i>
lentil	lentil	<i>Lens culinaris</i>
<b><i>other</i></b>		
coriander	coriander	<i>Coriandrum</i> sp.
cumin	cumin	<i>Cuminum cyminum</i>
wild/weed	wild/weed	

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