A Survey of Prehistoric Sites in the (Azraq Desert National Park), in Eastern Jordan.

by

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During March and April 1975 the authors made a brief survey of Palaeolithic and Neolithic sites in the Central Azraq Basin ("Azraq Desert National Park") in Eastern Jordan (for fuller details see Garrard and Stanley Price, forthcoming). The objectives were to relocate and examine the condition of prehistoric sites previously reported from the Park area, to collect systematic data on the density and relative date of prehistoric occupation in the region, and to assess the potential of the area for more intensive investigation involving settlement pattern analysis, excavation and related palaeoenvironmental studies.

Owing to the scarcity of cave and shelter sites, the Syrian Desert has been almost totally neglected by prehistorians although earlier surveys demonstrated the presence of fairly extensive Stone Age settlement over much of the area (Zeuner et al. 1957, Field 1960). Outside the Palmyra Basin in central Syria Coon 1956, Suzuki and Takai 1973, 1974) the only excavations was that of Waechter and Seton-Williams (1938) in the Wadi Dhobai of central-eastern Jordan.

The Azraq Basin was thought to be a particularly suitable focus for settlement studies. It covers an area of almost 13,000 sq. km. extending from marginal agricultural areas in the north and west with up to 300 mms. annual precipitation through into limestone hammada and basalt desert in the south and east with annual precipitation of less than 50 mms.. At the centre of the Basin there is a concentration of perennial springs and marshland, and also sedimentary evidence suggesting the presence of an extensive lake during the Pleistocene with a maximum area of 4500 sq. km. (Baker and Harza (1958).

A number of prehistoric sites have been located in the Azraq region (Rees 1929, Zeuner et al. 1957, Field 1960), but only two have been examined in any detail. Both were discovered during the U.S. Aid Point 4 Programme's, Princess 'Alia Project (Baker and Harza 1958). The site at Lion Spring, Ain el-Asad (Azraq 1 in Table 1) produced several hundred handaxes and faunal remains (Harding 1958, 1959, van Liere 1960-61). The second site, at C-Spring Azraq (Azraq 21 in Table 1) yielded a Levallois Mousterian industry and a fauna which included *Dicerorhinus* sp., *Equus hemionus & hydruntinus, Camelus dromedarius, Boselaphus* sp., *Alcelaphus* sp. and a large bovid (Clutton-Brock 1962, 1970).

Perhaps the major advantage in selecting the Azraq area as a centre for regional study lies in the extensive published data on the contemporary environment of the region, providing a "stage" from which to study the prehistoric utili-

sation. As a result of the outstanding biological interest of the Azraq marshlands (Mountfort 1966) and the potential of the surrounding area for multi-disciplinary arid zone studies, the International Biological Programme for the Conservation of Terrestrial Communities thought the area worthy of environmental protection and conservation, possibly within the framework of a National Park (see Map 1; Poore and Robertson 1964, Hemsley and George 1965, Boyd 1966, Nelson 1973).

Results of the 1975 Survey.

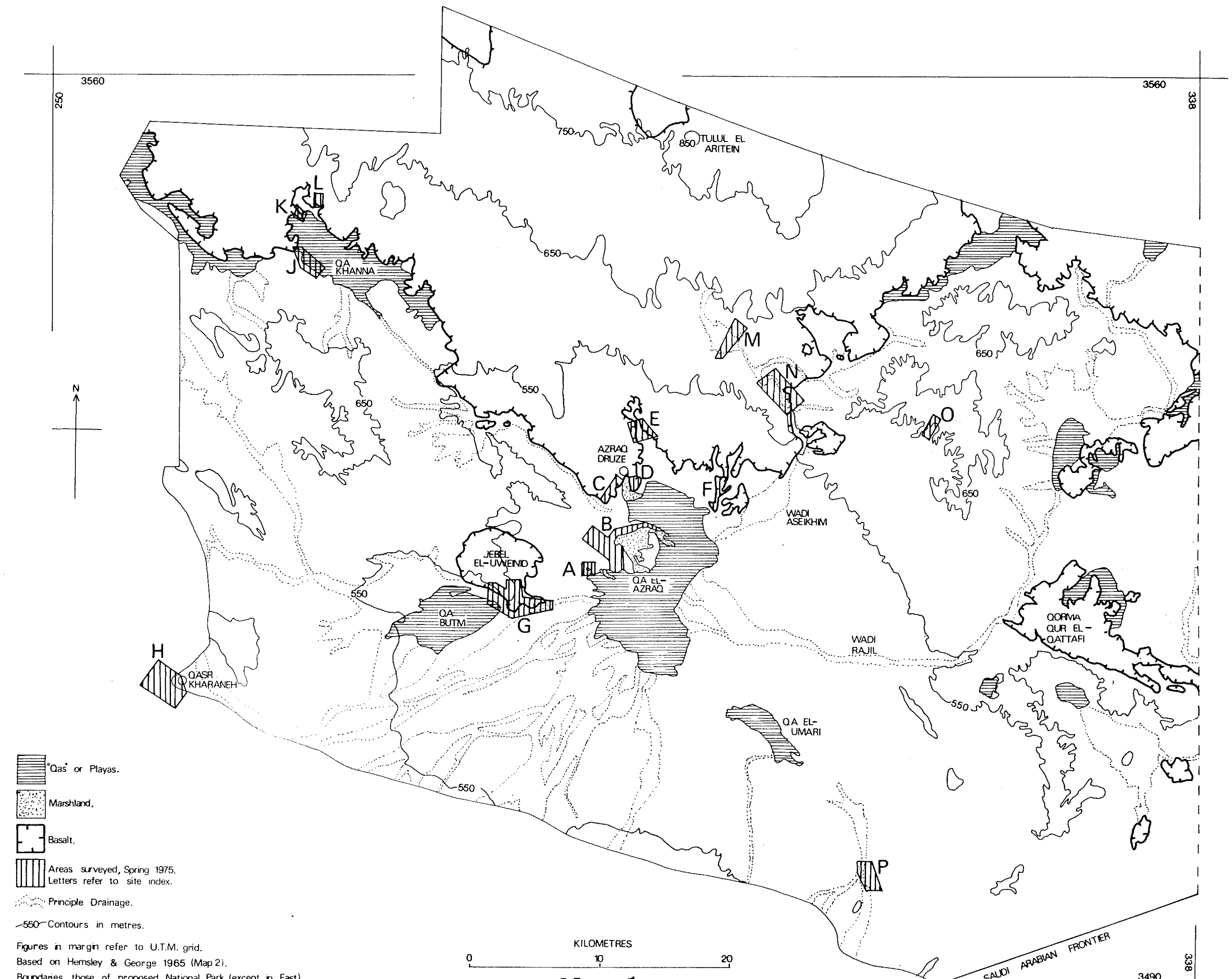
For the purpose of the preliminary study, a systematic survey was made of selected areas of the National Park (see Map 1). These were chosen primarily so as to cover a range of ecological situations within the Park region (based largely on geological and geomorphological features), but also so as to examine those areas adjacent to previously reported sites. In order to avoid excessive disturbance of surface sites, samples of flints were removed from marked, controlled areas, usually a metre square.

The sites located during the survey are listed by area in Table 1, with an indication of their approximate extent and period(s) of use. The assessment of period is provisional since at a number of sites artifacts were left in situ and from others only small selected samples have been examined in detail. These are described by Mrs. Lorraine Copeland in Garrard and Stanley Price (forthcoming). In addition to flint material, basalt "grindstones" and "pounders" were noted at a number of sites and preforated marine shells were collected from the Neolithic sites of Uweinid 6, 9 and 11 and the Kebaran site, Azraq 21. In the basalt region concentrations of flints often coincided with an area cleared of boulders or were found in or adjacent to hut circles built of basalt. An important objective of further survey work would be the detailed study and dating of these and other features, including the "desert kites" first reported by Rees (1929) in the Azraq area.

Discussion.

Although limited in scope the preliminary survey clearly demonstrated the density of prehistoric settlement in the Azraq National Park area and the potential for further research. Any deductions about site locational preferences would be premature at this stage since several cautionary factors are already apparent. The very density of site distribution demands that some form of random survey technique (cf. Thomas 1969) must be used in conjunction with a design based on postulated range resources. Although the lack of recent human disturbance is encouraging for the recovery of detailed site distribution data, the discovery of some sites will be subject to the exposure of former land surfaces by deflation or fluvial action. Until local chronologies based on excavation and absolute dating are established, relative dating of the sites has to be based on comparisons with industries found in a very broad range of environmental locations throughout the Levant and Arabian peninsula. Moreover, as emphasised above, detailed examination has hitherto been restricted to very small selected samples.

With these reservations in mind, certain tentative observations are neverthe-


3560
250
3560
338
750
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TULUL EL ARITEIN
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JEBEL EL-UWEIND
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QA EL-AZRAQ
550
QA BUTM
G
QORMA QUR EL-QATTAFI
WADI RAJIL
H
QASR KHARANEH
550
QA EL-UMARI
550
P
'Qas' or Playas.
Marshland.
Basalt.
Areas surveyed, Spring 1975. Letters refer to site index.
Principle Drainage.
550 Contours in metres.
Figures in margin refer to U.T.M. grid.
Based on Hemsley & George 1965 (Map 2).
Boundaries those of proposed National Park (except in East).
KILOMETRES
0
10
20
SAUDI ARABIAN FRONTIER
3490
338
N

Map. 1

less possible. Sites of all major periods from Lower Palaeolithic to Chalcolithic appear to be present although some industries are very poorly represented, for example the Upper Palaeolithic. In this context it is relevant to recall the relatively few Upper Palaeolithic sites in the Har Harif area of the Negev compared with their common occurance around the En Avdat perennial spring (Marks 1971). Geomorphological studies in neighbouring pluvial lake basins provide evidence of a period of relatively great aridity during the Upper Palaeolithic (El Jafr, Huckriede and Wiesemann 1968; Dead Sea, Neev and Emery 1967; Damascus, Kaiser et al. 1973).

In the Azraq and Uweinid areas (Map 1, Areas A-G), Neolithic sites tend to be situated at the basalt margins while Middle and Epipalaeolithic sites are found in the immediate vicinity of perennial springs. This distinction in locational preferences may be the result of variations in lake level or of the greater availability of natural seeps at the basalt margin during the period of Neolithic occupation. Alternatively different economic bases may be responsible for the contrast, with Neolithic sites established at the contact to facilitate exploitation of the two adjacent resource zones, for example for the spring bloom of cereal grasses on the basalt and for the browsing/grazing potential of the alluvial area.

Only much more extensive survey and palaeoenvironmental analysis will clarify the locational determinants at different phases. Although the extent of site obliteration seems to be limited, the surface distribution of artifacts within sites has probably been distorted by erosive agencies. Studies of intrasite patterning will therefore concentrate on excavation of selected sites, of which a number in the alluvial areas appear to be highly suitable. In particular further investigation of two previously recorded sites would seem promising, namely Ain el-Asad (Azraq 1 in Area A, Map 1; Harding 1958, 1959) at which Acheulian, Middle Palaeolithic (?) and Pottery Neolithic industries appear to be represented, and Kharaneh 4 (Area H, Map 1). The latter site (Harding 1959) is perhaps the outstanding site in the survey area, with a profile reminiscent of a tell-formation and an area of 20,000 sq. m. virtually "paved" with artifacts of Upper Palaeolithic (?), Natufian, Pre-Pottery Neolithic and Pottery Neolithic (?) industries. The surface remains include ground stone implements of basalt and limestone, and organic preservation appears to be excellent. In addition to these two sites, others such as Azraq 16 (Middle Palaeolithic), Azraq 17 (Kebaran) and Azraq 18 (Natufian) are likely to contain stratified material.

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report on the flints (forthcoming) we are very grateful to Mrs. L. Copeland.

Subheading to Map 1.

Map illustrating the basic topography of the Central Azraq Basin and the areas surveyed during 1975.

Excepting the east, the boundaries are those of the proposed Azraq Desert National Park. (Hemsley and George 1965).

Subheading to Table 1.

Index of prehistoric sites located in Azraq National Park area during 1975 survey.

Estimates of artifact distribution area are very approximate and do not take into account artifact density.

Class 1 = 0 - 2000 sq. m.

Class 2 = 2000 - 8000 sq. m.

Class 3 = 8000 - 30000 sq. m.

Class 4 = 30000 + sq. m.

Period abbreviations are as follows: A/Y - Acheulian or Yabrudian; M.P. - Middle Palaeolithic; U.P. - Upper Palaeolithic; E.P. - Epipalaeolithic; Neol. - Neolithic; Chal. - Chalcolithic; ? -Undiagnostic.

"Exam. by L.C." indicates that a selection of artifacts from the site were examined by Lorraine Copeland.

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Site Index Site	Survey areas See Map.	Size Class	PERIOD							Exam. by L.C.	Earlier References
			A/Y	M.P.	U.P.	E.P.	Neol	Chal	?		
Azraq 1 (Ain el Asad)	A	Subsurface	×	?			×			×	Baker & Harza '58 Harding '58, '59. van Liere '60-'61.
Azraq 2	C	4	×				×			×	
Azraq 3	F	2					?			×	
Azraq 4	C	2					×			×	
Azraq 5	C	Diffuse		×					?	×	
Azraq 6	C	3					×				
Azraq 7	C	4					×				
Azraq 8	C	2					×				
Azraq 9	C	1					×				
Azraq 10	D	1					×				
Azraq 11	D	2					×				
Azraq 12	D	2					×				
Azraq 13	D	1					×				
Azraq 14	D	1					×				
Azraq 15	E	?					×				
Azraq 16	E	Subsurface		×			?			×	
Azraq 17	B	2				×	?			×	
Azraq 18	B	2				×				×	
Azraq 19	B	Isolated							?	×	
Azraq 20	B	find. 1 find.				×				×	
Azraq 21 (C-Spring Azraq)	B	Subsurface (Not Located)	?	×							Baker & Harza '58. Clutton - Brock' 62,' 70.
Uweinid 1	G	Isolated	×								
Uweinid 2	G	1 Find.							?		
Uneinid 3	G	3					?			×	
Uweinid 4	G	Diffuse.							?		
Uweinid 5	G	Diffuse.							?	×	
Uweinid 6 (Qasr Uweinid)	G	3				?	×			×	Rees '29.
Uweinid 7	G	2		×			?			×	

Site Index Site	Survey areas See Map	Size Class	PERIOD							Exam. by L.C.	Earlier References
			A/Y	M.P.	U.P.	E.P.	Neol	Chal	?		
Uweinid 8	G	2					×				
Uweinid 9	G	2					×			×	
Uweinid 10	G	Isolated	×								
Uweinid 11	G	3 find					×				
Uweinid 12	G	2					×				
Uweinid 13	G	3					×				
Kharaneh 1	H	4			?		?			×	
Kharaneh 2	H	3					×			×	
Kharaneh 3	H	?							?		
Kharaneh 4	H	3 very conc.			?	×	×			×	Zeuner '57. (Site 84).
(Kharaneh IV)											Harding '59.
Kharaneh 5	H	Diffuse.	?						?		
Kharaneh 6	H	Diffuse.	?	?							
Kharaneh 7	H	2					×	?		×	
Khanna 1	J	4	?						?		
Khanna 2	J	2				?	?				
Khanna 3	J	4	?								
Khanna 4	K	2		×		×	?			×	Rees '29.
(Habeiba)											
Khanna 5	K	2				×					
Khanna 6	K	1				×					
Khanna 7	K	Disturbed		×		×					
Aseikhim 1	N	Disturbed		?					?		
Aseikhim 2	N	Diffuse.	×	?							
Aseikhim 3	N	1					×			×	
Aseikhim 4	N	1					×				
Aseikhim 5	N	1					?	?		×	
Aseikhim 6	N	2					×				
Aseikhim 7	N	Diffuse							?		

N.B. No Sites were located in survey areas L, M, O, P.

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