

Recent Prehistoric Field Research in Central Tunisia: Prehistoric Occupations in the Meknassy Basin

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Abstract Recent field prospection and test excavations in the Meknassy Basin (Central Tunisia) has revealed many prehistoric sites covering almost all the phases of North African prehistory from the Palaeolithic to the Neolithic. Excavations at the Aïn El-Guettar Mousterian site has yielded a faunal assemblage dominated by bovinds and equids. One human tooth was found in situ. The stratigraphic sequence contains charcoal-rich occupation layers with faunal, human and lithic finds. A level with an industry resembling the Aterian was found beneath a Mousterian layer. The excavations at Aïn Oum Henda 2 (Jebel Maloussi) provided many Middle Palaeolithic lithic artefacts, some of which are pedunculates. From the excavations of the Rammadiya El Oghrab (Jebel Bou Hedma) we recovered some bones of antelope, many fragments of ostrich egg shell (among them a worked disc), an enormous quantity of flint (tools and splinters) and of land snails. In spite of the scarcity of land snails and the absence of bone in the *rammadiya* of Jebel Bou Hedma 1, the site produced a beautiful flint collection including an arrowhead found on the surface, which led us to place the site in the Neolithic.

Resumé De récentes prospections et sondages dans la cuvette de Meknassy (Tunisie Centrale) ont révélé la présence de nombreux sites préhistoriques couvrant toutes les phases de l'évolution des civilisations nord-africaines, depuis le Paléolithique jusqu'au Néolithique. La fouille du site moustérien de Aïn El-Guettar a livré une quantité impressionnante de matériel archéologique (faune abondante associée à une industrie lithique inaccoutumée). Un niveau archéologique d'attribution atérienne a été découvert sous le niveau moustérien. Les sondages du site de Aïn Oum Henda 2 ont fourni un grand nombre de pièces lithiques (dont plusieurs pièces pédonculées). Ce matériel montre un débitage de type Levallois typique du Paléolithique moyen.

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Les sondages effectués dans la Rammadiya El Oghrab ont mis au jour quelques ossements d'Antilope, beaucoup de fragments d'œufs d'autruche (dont une rondelle) et une énorme quantité de silex (outils et éclats) et de gastéropode. En dépit de la rareté des escargots dans la Rammadiya de Jebel Bou Hedma 1 et l'absence totale d'ossements, le site a livré une belle collection de silex. La trouvaille d'une pointe de flèche en surface, nous permet d'attribuer le site au Néolithique.

Keywords Meknassy · Mousterian · Human remains · Mammalian fauna · Lithic industry · Central Tunisia

Introduction

Initial field research in the Meknassy Basin by geologists and hydrogeologists was followed by geomorphological studies (Ben Oueddou 1994, Ouda et al. 1998, Bedoui 2002) that led to the discovery of many prehistoric sites.

Located at the southern end of Central Tunisia, the region of Meknassy is like an almost closed basin, bounded by a series of uplands: Jebel El Maloussi, Jebel Majoura and Jebel El Goussa in the north and west, Jebel Bou Hedma and Jebel Bou Douaou in the south, and Jebel Mehiri-Zebbeus, Kef Abdallah, Jebel Dribika El Hamra and Jebel Nadhour in the east. The only communications with the external world are via the strait of El Bkakrya in the north, Wadi Leben in the east and the region of Snad in the south (Fig. 1). After our systematic prospecting in the Meknassy Basin, in particular around the wadis and springs, we discovered and dug in several places in order to evaluate their archaeological potential. Furthermore, we tried to understand paleoenvironmental and landscape change in relation to human occupation during the various prehistoric phases. Our overall objective was to understand the nature of the prehistoric settlement, and thus migrations, and the relations of exchange with other populations of the region of Gafsa in the southwest, the alluvial plain of the Sahel to the east, and more open areas in the north. We will describe five sites in chronological order. They will be studied in detail next year, through an ongoing program of excavations.

Aïn El-Guettar (GPS Lat. 34°39'35" N; Long. 9°34'57" E; Altitude: 226 m)

The excavated site is at approximately 130 m to the southeast of the source called Aïn El-Guettar and on the right bank of Wadi Leben. A first test pit S1 (1 m/1 m) was dug in the sandy dune; the greenish argillaceous level yielded a few archaeological artefacts. A second test pit S2 (1 m/2m), oriented north/south, was excavated further upstream from the dune. The lithology of the layers exposed is as follows, from top to bottom (Figs. 2 and 3):

- At the top a compact sandy layer including chalk intercalations.
- A bed of greenish clay including bones of bovinds and equids and some flints.
- A bed of dark clay with abundant bones and lithic industry (Fig. 4).
- A bed of greenish sterile clay at the bottom.

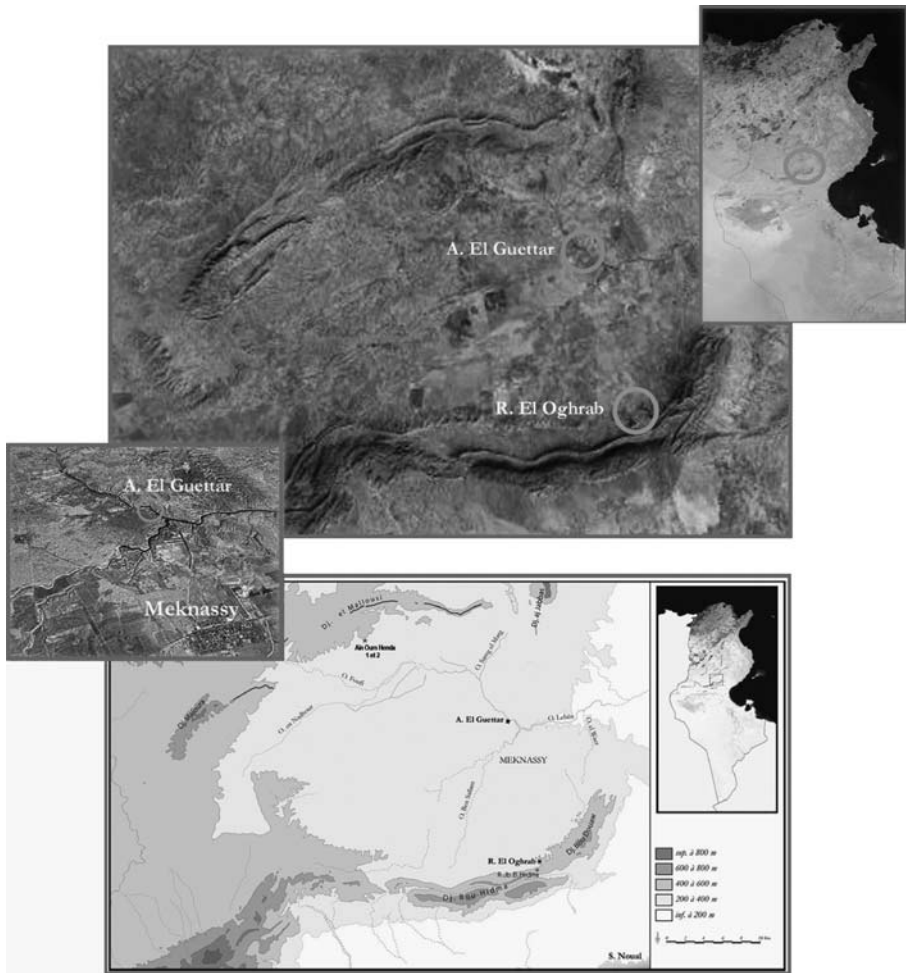


Fig. 1 Location of the Meknassy Basin and other sites discussed in the text

We collected 20 lithic pieces on the surface (3 Levallois cores, 2 Levallois flakes, 9 scrapers, 6 Mousterian points). The total lithic materials from test pits S1 and S2 is shown in Table 1.

The lithic series shows clearly a Levalloisian mode of flaking. The analysis of objects from S2 seems to indicate that the production of blanks and their transformation into tools was done at the site. Tool groups seem to indicate two types of activities: hunting (the Mousterian points) and domestic tasks (skin treatment using scrapers; butchery with knives). Faunal cranial remains (jawbones, mandibles, teeth) are numerous. The post-cranial bones are very fragile and rapidly crumble once exposed. Bones of equids and bovids are dominant. In March 2006, we began a systematic excavation in order to understand the spatial distribution of the archaeological objects and to establish the different stratigraphic layers. A thin bed of small fluvial stones covers the black clay bed. The stones are rolled and well

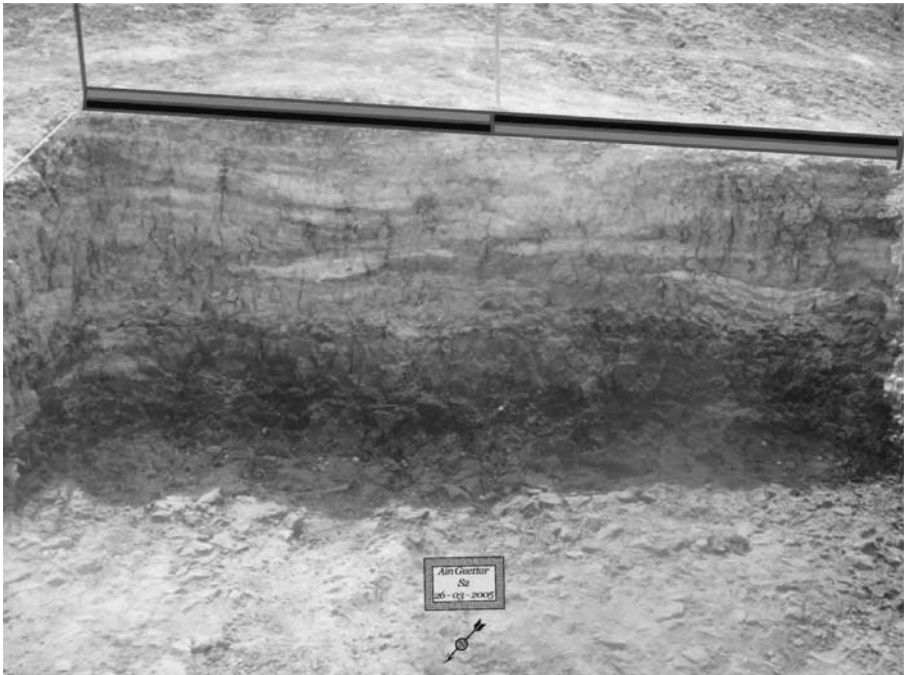


Fig. 2 Ain El-Guettar, Section E/W of test pit S2

Fig. 3 Ain El-Guettar, Stratigraphic section of test pit S2

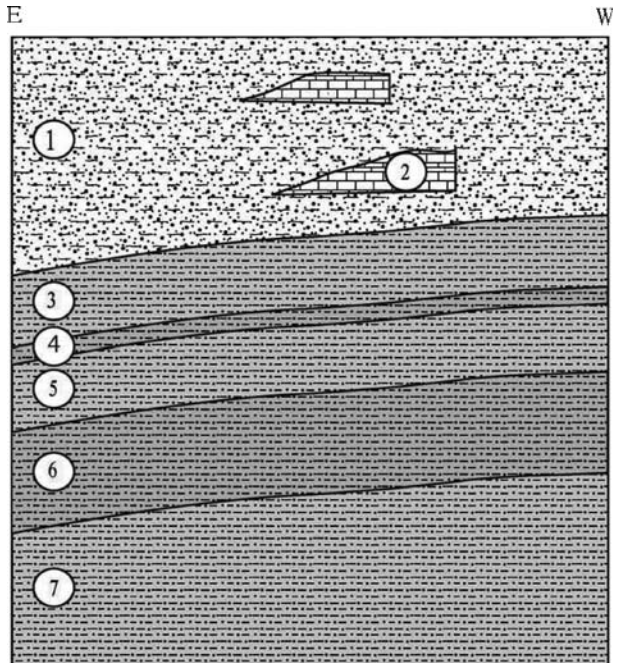
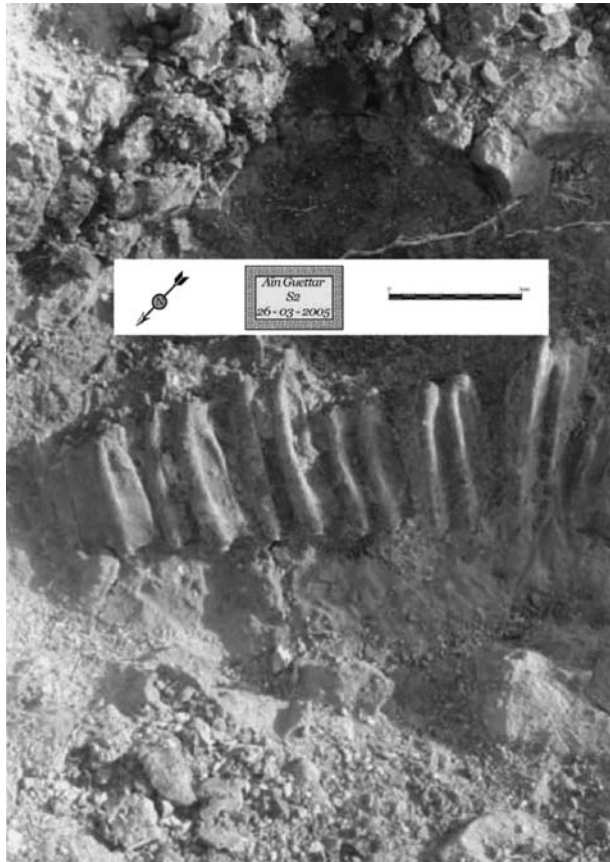


Fig. 4 Aïn El-Guettar, *Equus* upper teeth from test pit S2



rounded. The archaeological material collected from the different layers totals 504 faunal remains and lithic objects (Table 2).

We analyzed 360 lithic objects. The results presented are limited to complete flakes, cores and tools (Table 3).

It should be noted that the flint nodules came from the area of Gafsa (80 km distant). Faunal remains are made up of six taxonomic groups (Table 4).

The faunal assemblage is composed of 19.5% cranial and 80.5% post-cranial remains ($N=364$). Adult individuals dominate with 94.3% of the total number of bones for which age determination was possible ($N=192$). Young-adult individuals form 4.7%, whereas the young constitute only 1% of the total. Some bones have cutmarks.

Around the excavated site, we collected several lithic artefacts that resembled Aterian finds. They were found mainly in layers below the Mousterian one, and we therefore decided to excavate deeper in square M5, starting from the Mousterian level.

Table 1 Aïn El-Guettar, lithic material from test pits S1 and S2

Test	Cores	Flakes	Scrapers	Mousterian points	Debris
S1	0	21	1	0	14
S2	0	23	4	2	61

Table 2 Ain El-Guettar, percentage of objects from each archaeological layer (total=504)

Stratigraphic layer	Percentage
Brown clay	0.2
Black clay	66.3
Green clay	32.1
White chalk	1.2
Greenish brown chalk	0.2

At approximately 227 cm, in a green clay level with high percentage of white gypsum below the Mousterian level, we found fragments of ostrich eggshell, and very patinated flints of Aterian aspect, similar to those collected on the eroded slopes.

Ain Oum Henda 2 (GPS Lat. 34°74'39"N; Long. 9°53'88" E; Altitude: 278 m)

The southern slope of Jebel Maloussi (stratotype of the Lower Cretaceous Maloussi formation) is full of prehistoric sites especially around springs. We chose to prospect and probe one Middle Palaeolithic site and a huge *rammadiya* (dark grey deposits containing ash, charcoal and fire cracked rock) on its southern slopes. Both are located in the immediate vicinity of the spring at Ain Oum Henda (Fig. 5). Upstream from the spring and a few meters to the east, we inventoried an interesting Middle Palaeolithic site where, because of water and wind erosion, flints are scattered on the surface. The test S1 (1 m/1.5 m) was carried out on the right bank of a small ravine, not far from a recent rectangular basin built to capture rainwater. The direction of the test was northwest/southeast and opening to the east. At the top, the level contains a yellowish, compact and sterile crust. Just below this is an archaeological deposit, formed by green sandy clay and containing flint (Fig. 6).

On the surface, we collected 93 lithic pieces: 8 Levallois cores; 40 flakes; 31 scrapers; 11 Mousterian points. The collection includes one scraper and two pedunculate tools that indicate an Aterian origin. The S1 test pit produced 71 additional artefacts (Table 5).

Rammadiya El Oghrab (GPS Lat. 34°53'95" N; Long. 9°65'56" E; Altitude: 425 m)

The site was discovered and inventoried by the team of the “Carte Nationale des sites archéologiques et des monuments historiques” (Ben Bâaziz 2003). It is located about fifteen kilometers south of Meknassy, on one of the hills of Jebel Erchihi (just before

Table 3 Ain El-Guettar, percentage of different lithic categories

Categories	Number	Percentage
Cores	5	4.5
Cortical flake (>1 cm)	14	12.7
Non-cortical (>1 cm)	53	48.2
Tools	38	34.5
Retouch flakes (<1 cm)	250	

Table 4 Ain El-Guettar, per-centage of each taxon (total identified=172)

Bovids (%)	Equids (%)	Canids (%)	Birds (%)	Wild boars (%)	Rodents (%)
50	41.3	41%	2.9	1.2	0.6

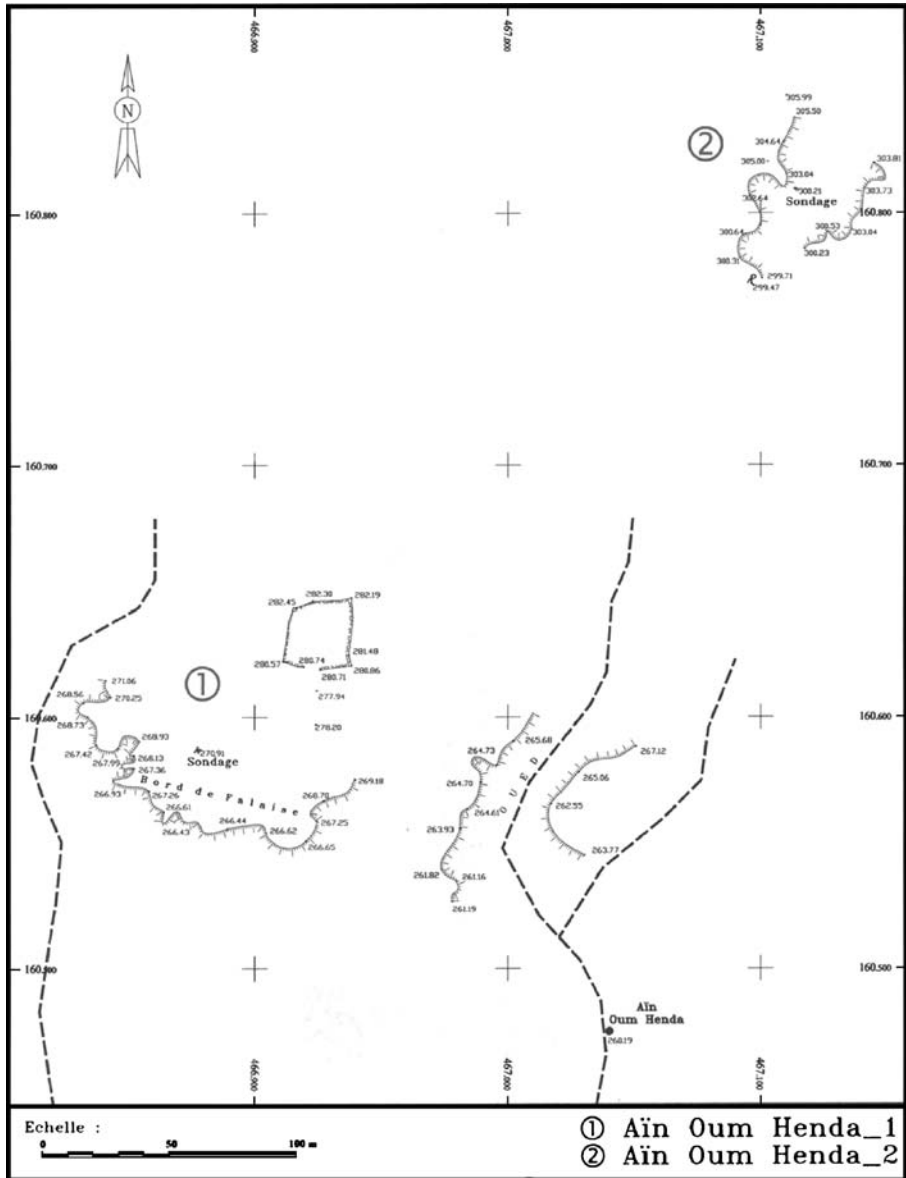


Fig. 5 Topographic drawing of sites of Ain Oum Henda 1 and Ain Oum Henda 2

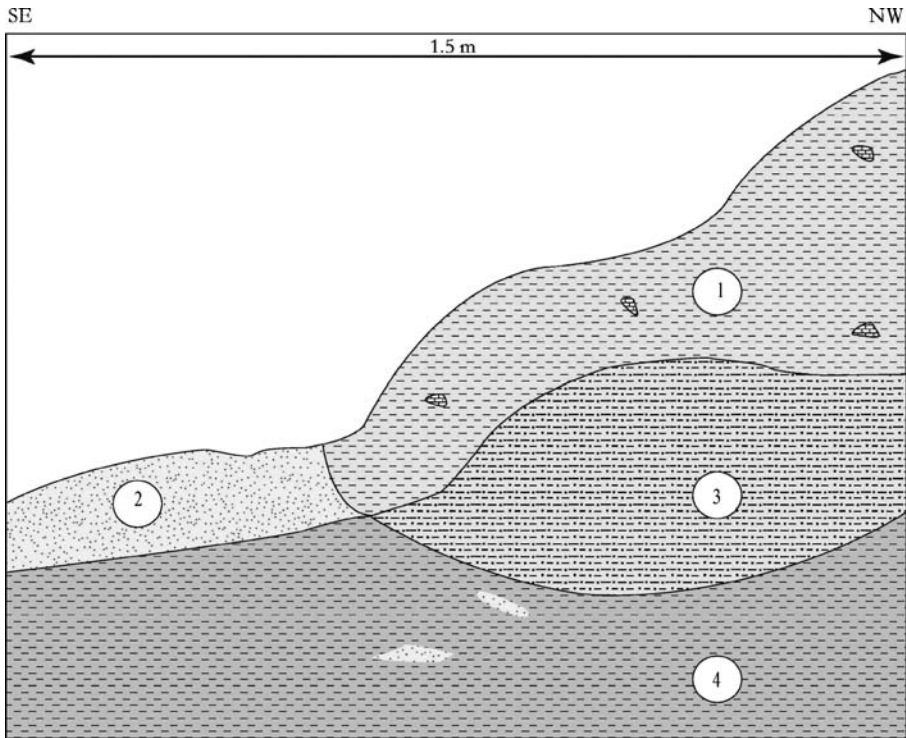


Fig. 6 Ain Oum Henda 2, Stratigraphic section of test pit S1

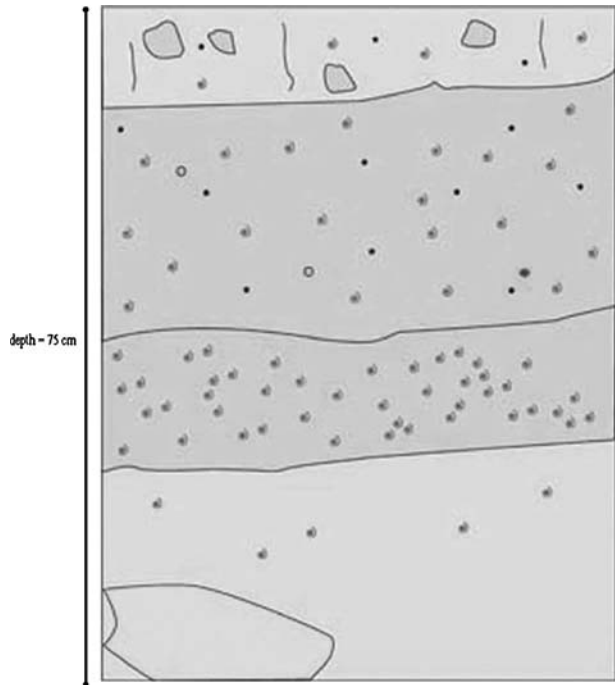
the northern slope of Jebel Bou Hedma). Located not far from the left bank of Wadi Erchihi, it is just to the west and downstream from the commemorative stele of the national service. A water court divides the site into two unequal parts, and planted cactus disturbs its northwestern part. We started by weeding and cleaning the northwestern part of the *rammadiya* and then began digging a first test pit S1 (2 m/1 m) directed east/west (Fig. 7). We excavated in 5 cm artificial layers, so as to detect any qualitative or quantitative stratigraphic change, and the deposits were systematically dry sieved. At the summit of the *rammadiya*, we dug two other test pits in order to locate the habitation zone. A circular structure of juxtaposed stones, probably representing wedges for holding a hut steady, was located in one of them.

The earliest occupation at Rammadiya El Oghrab was at US 15 (at 75 cm of depth) dated to around 10,296±386 radiocarbon years bp on land snails (Sidi Thabet Nuclear Laboratory, Tunis). This dating should be considered with caution (the species of snails analysed belonged to *Helix melanostoma* and *Leucochroa candissima*). The examination of the lithics and the stratigraphic position of the industry seems to indicate it belongs to the Upper Capsian culture.

Table 5 Ain Oum Henda 2, lithic material from the two levels of S1

Levels	Cores	Flakes	Scrapers	Debris
Level I	1	9	3	19
Level II	0	18	0	21

Fig. 7 Rammadiya El Oghrab, Stratigraphic section of test pit S1 (east side)



Rammadiya Aïn Oum Henda 1 (GPS Lat. 34°74'53" N; Long. 9°54'003" E; Altitude: 292 m)

Located near the base of Jebel Maloussi, to the west of Aïn Oum Henda, this large *rammadiya* is strewn with flints, burned stones and terrestrial gastropods. Test pit S1 (1 m/1.5 m) was excavated in the western part of the *rammadiya*. Great quantities of land snails were collected particularly in the upper levels. The two dominant species are *Helix melanostoma* and *Leucochroa candissima*. Some ostrich eggshell fragments were also present in the upper levels. The lithic material is listed in Table 6.

Rammadyet Jebel Bou Hedma (GPS Lat. 34°53'60" N; Long. 9°65'97" E; Altitude: 457 m)

In the northern part of Jebel Bou Hedma, along the Wadi Erchihi, we discovered several *rammadiyas* on each side of the wadi. We decided to excavate a 1m² test pit at one of them. We chose Jebel Bou Hedma 1, where we found an arrowhead on the surface. This feature is on the southern side of Jebel Bou Hedma, above a small mound on the

Table 6 Rammadiya Aïn Oum Henda 1, total number of each lithic category from test pit S1

A	Cores	Blades	Flakes	Tools	Debris
N	13	94	105 (>1 cm)+27 (< 1 cm)	12	173



Fig. 8 Stratigraphic section of Rammadiya Jebel Bou Hedma 1

right bank of Erchihi Wadi. The prevailing wind from the west sweeps the site almost daily, and this plus the elevated location, explains the fact that the *rammadiya* is heavily eroded and that the archaeological material was transported towards the bottom of the wadi. The archaeological layer is only 40 cm thick, and we quickly reached the substratum, which is formed of friable white chalk (Fig. 8). The archaeological material found in an ashy layer is made up of fragments of ostrich eggshell (18 fragments at 10 cm, 3 fragments at 20 cm) and flints, some of which are intentionally heated. We noted the scarcity of snails (*Helix melanostoma* and *Leucochroa*). We counted 113 shells at 10 cm, 42 shells at 20 cm, 32 shells at 30 cm and 22 shells at 40 cm depth. Bones are not well preserved. The categories of lithics are shown in Table 7 and the presence of an arrowhead suggests a Neolithic date.

Conclusions

The Meknassy Basin is one of the richest areas of previously unexploited prehistoric sites in Tunisia. With its wadis and springs (some of which still have water today), the

Table 7 Rammadiya Jebel Bou Hedma 1, total number of each lithic category

Categories	Cores	Blades	Flakes	Tools	Debris
N	2	46	41 (>1 cm)+ 23 (<1 cm)	11	70

area has attracted faunal and human groups for a long time. Typical Senonian flint of the Aïn Zanouch (Snad region) is present in both Middle Palaeolithic sites and in the later *rammadiyahs*, showing that prehistoric groups came to the basin from the area of Gafsa and farther west (from the high plateaus of Tebessa) towards the north or the Sahel of Tunisia. The site of Aïn El-Guettar yielded a diversified fauna of large and small mammals, associated with a Mousterian industry. The fauna indicate various biotopes, apparently dominated by meadows and forests. The discovery of an “Aterian-like” lithic industry below the level of the Mousterian, suggests that interesting prehistoric research can be done at Aïn El-Guettar. Further investigations are required to obtain more chronological and environmental information.

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