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**First Season of Excavation at the Nahal Mahanayim Outlet (NMO)
Mousterian Site – A Preliminary Report**

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The first season of excavation at the Mousterian site of the Nahal Mahanayim Outlet (NMO) to the Jordan River took place from August 26 to September 11, 2007. The aims of this preliminary excavation were to establish the stratigraphic context of the site's layers and to gain better understanding of the nature of the archaeological occurrences in this locality.

The 3-week excavation was executed with the help of students of the Institute of Archaeology of the Hebrew University, University of Southampton (UK) and from the Czech Republic. I would like to thank them and the members of Kibbutz Gadot who made the excavation possible.

The excavation took place on the east bank of the Jordan River, opposite the outlet of Nahal Mahanayim to the Jordan from the west. The excavation included the following (see Fig. 1):

1. Three small excavation areas, areas A to C, along the banks of the river, in localities that were identified as showing archaeological potential.
2. Ten geological sections along the east bank of the Jordan River, aiming to achieve a correlated stratigraphy of the study area.
3. A deep geological trench (Trench I), some 30 meters long and 3.5 meters deep, dug by excavator tractor on the flood plain of the river. The trench was excavated during the last week of the excavation season in an attempt to better understand the information gathered from the excavation areas and sections and draw a comprehensive, sequential picture of the site's layers.

The preliminary results of the first excavation season can be summarized as follows:

Stratigraphy

The southern section of the study area comprises light grey limmenic clays and silts that were probably formed in a lake with a water stand of a few meters (Fig 4). This part of the study area, between section 7-01 and Area B (see Fig. 1 & 5) is archaeologically sterile and is also poor of fauna and botanical remains. The limmenenic clay is characterized by lenses of darker gray clay with no layers. In few localities basalt boulders were observed “floating” within the clay. The basalt is heavily weathered, showing “onion peel” exfoliation process (Fig 3). These boulders were first considered as basalt flows but the results of the excavation place them as boulders. The presence of such boulders within the low energy depositional environment of the clay still awaits geological explanation.

Archaeological layers, containing typical Mousterian artifacts and many animal bones, were exposed in-situ within a sequence of fine black to brown clays. The sequence of clays is embedded on a layer of basalt cobbles and boulders of unknown age.

The upper part of the clay sequence is cut by a few channels of ancient streams that laid sands mixed with basalt, limestone and small flint pebbles. The channel sediments include many stone tools in different stages of weathering and can be dated, based on tool typology, from the Upper Paleolithic to the Neolithic periods (Fig 6a). The presence of ceramic and metal objects (coins and fishing net weights – Fig. 6b) suggests that these channels represent the course of the ancient Jordan River, perhaps 1000 years ago.

In order to achieve a general and comprehensive picture of the site’s stratigraphy, a geological trench (Trench I) was excavated. Figures 7 and 8 present the east and west sections of this trench. Note that in Fig.8 only section c of the trench is shown.

The combination of the data retrieved from the geological sections and Trench has enabled us to suggest a general stratigraphic sequence for the Jordan River east bank at

the excavation locality (Fig. 9). Middle Paleolithic layers were found in-situ within a series of clays overlying a layer of basalt cobbles and cut by ancient river channels and heavy drainage machinery work. The MP layers are rich in fresh Mousterian stone tools, bones and well preserved botanical materials. The presence of both Upper Paleolithic and Neolithic stone tools in fresh condition indicates the presence of these prehistoric cultures in the site's vicinity as well, however, in-situ layers from these periods have not yet been found at this preliminary stage.

Finds

The focus of this section is on the finds from the *in situ* Mousterian layers unearthed during the excavation. Many additional artifacts came from the excavation of the upper layers of the site (the ancient river channels) and include late period stone tools (UP or Epi-Palaeolithic bladelets and cores and Neolithic arrowheads), lead fishing net weights, ceramics and even 3 coins, possibly from the Muslim period.

The Mousterian layers were exposed in a very small area, totaling less than 5 square meters. The main finds are Levallois blades and flakes including a few typical Mousterian points (figure 10). The lithic artifact density seems to be relatively low but the tools found are very well made and indicative of the Mousterian period.

In contrast to the lithic assemblage, the faunal assemblage of these layers is extremely rich and in excellent state of preservation. The main animal represented is clearly bos, the most significant find being the skull, including the horn core of a large cow (figure 11). Other animals found include cervids, wild boar and turtles. The assemblage of mollusks from the site is rich and diverse. Preliminary study has shown that the botanical remains are well preserved within the clay layers, together with charcoal that is found in large quantities. A sample of charcoal was sent for C14 dating and the results are expected soon.

The results of the first short preliminary season of excavation at the NMO site are the gaining of a general understanding of the site's stratigraphy and the collection of an assemblage of *in situ* finds that enabled the assigning of the layers to the Middle Paleolithic Mousterian period. The generous grant by the Leakey Foundation (together with a smaller grant from the Irean Sala Foundation) made possible the excavation and the ongoing analysis of the finds. I propose to use the remaining grant funds to continue analysis of the finds through summer 2008 and for a second season of excavation planned for early fall 2008. The second season will focus on the primary layers and sections of the study area as indicated by the first season findings.

Figures

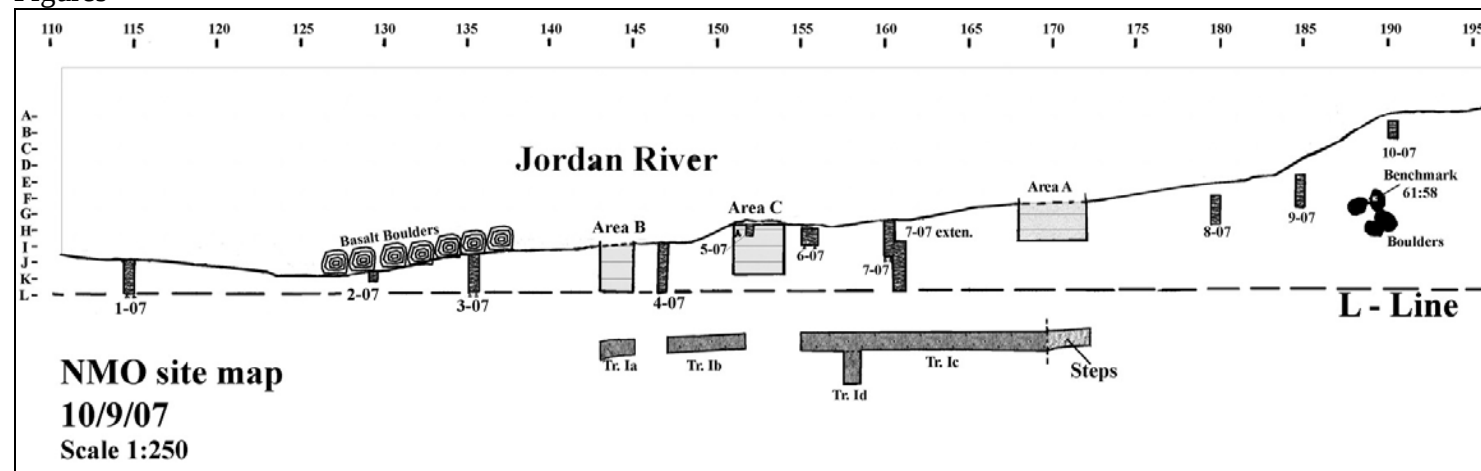


Figure 1: Map of excavation areas, sections and geological trench at NMO 2007 season.



Figure 2: Location of excavation areas along the Jordan River.



Figure 3: Onion exfoliation of basalt boulders within limmenic clay layer



Figure 4: Section 3-07. Sterile limmenic clay below layer of recent river deposits. Scale 20cm.

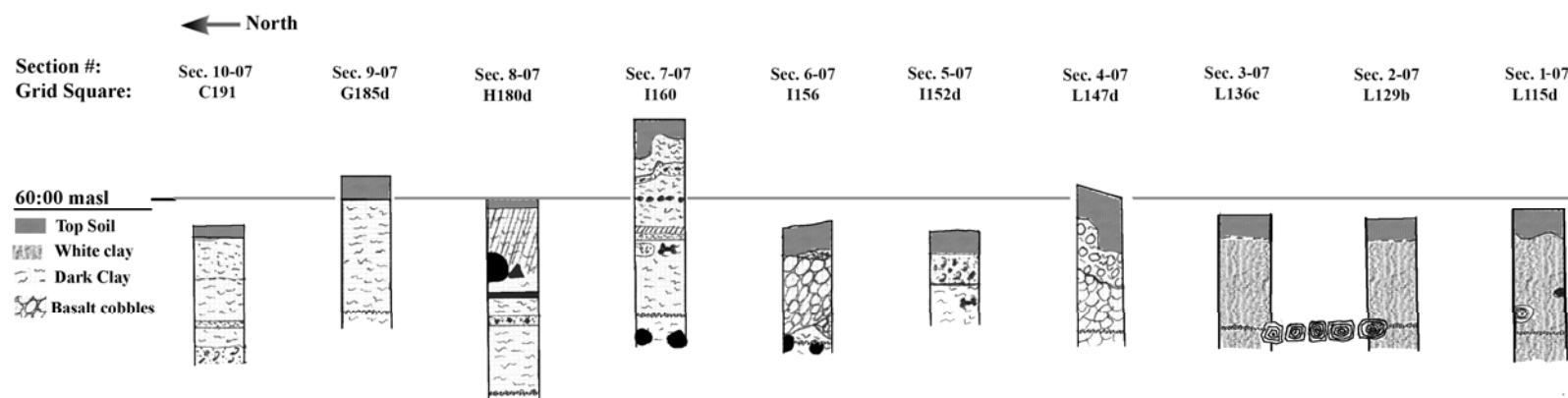


Figure 5: NMO 2007 sections

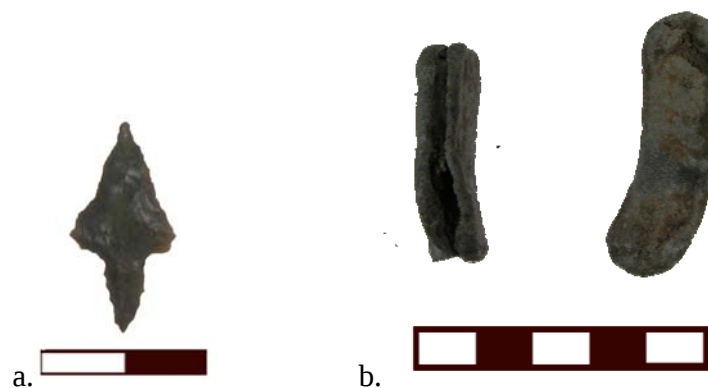


Figure 6: Finds from upper layer (Old Jordan channel?) of Area C: a: Lead fishing net weight; b. Late Neolithic arrow head.

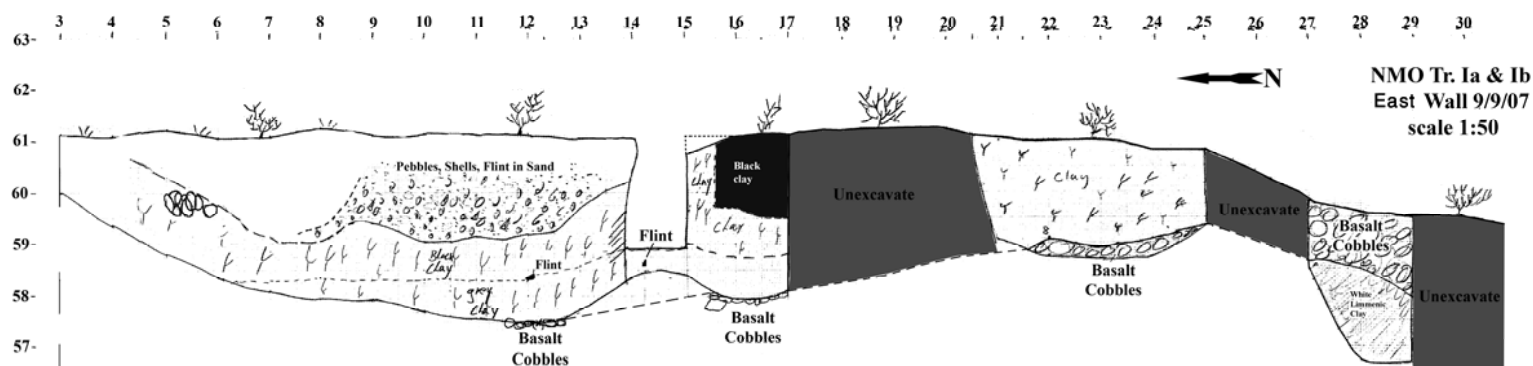


Figure 7: NMO 2007 Geological Trench I – east face of trench

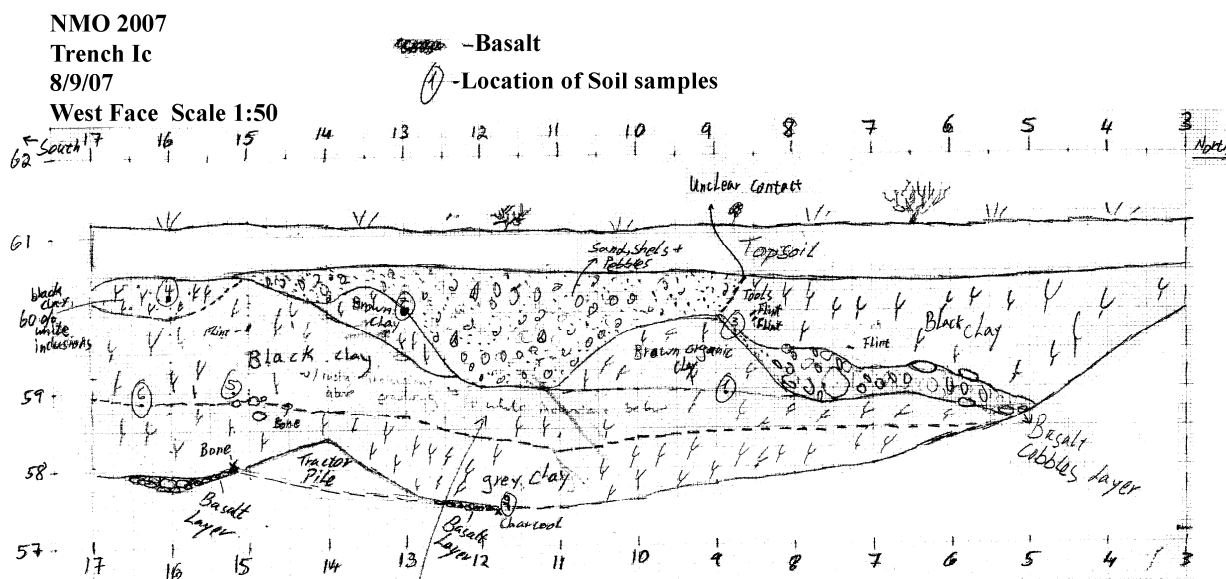


Figure 8: NMO 2007 Geological Trench I – west face of trench

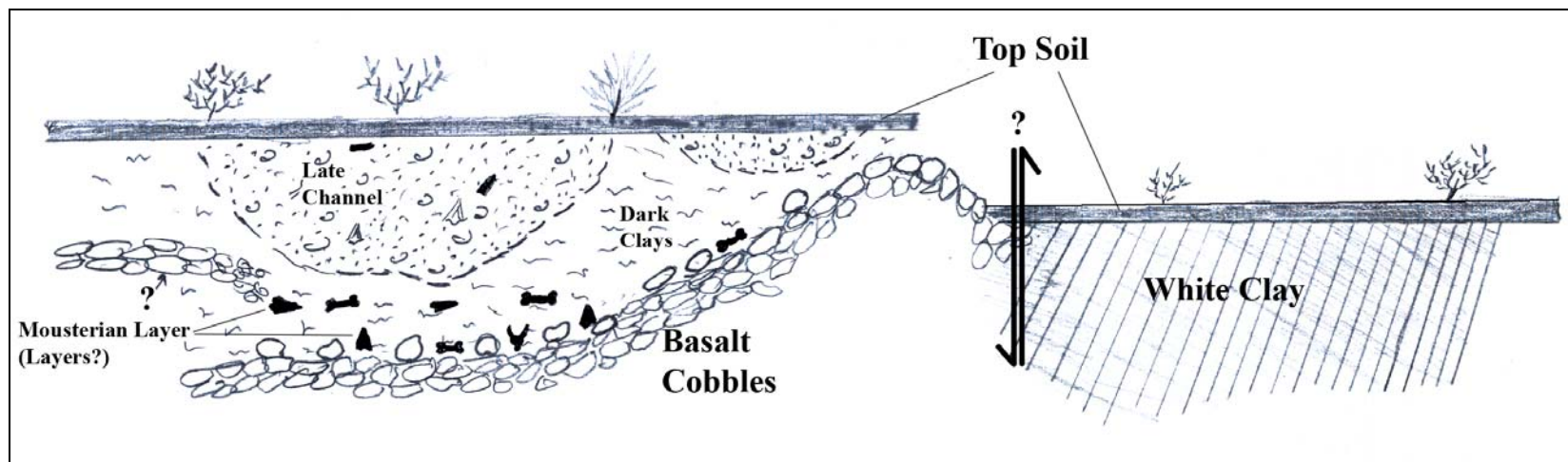


Figure 9: A generalized stratigraphic sequence of the NMO layers.



Figure 10: Mousterian points from NMO 2007 excavation.



Figure 11: Skull of a cow from Area C, NMO 2007.