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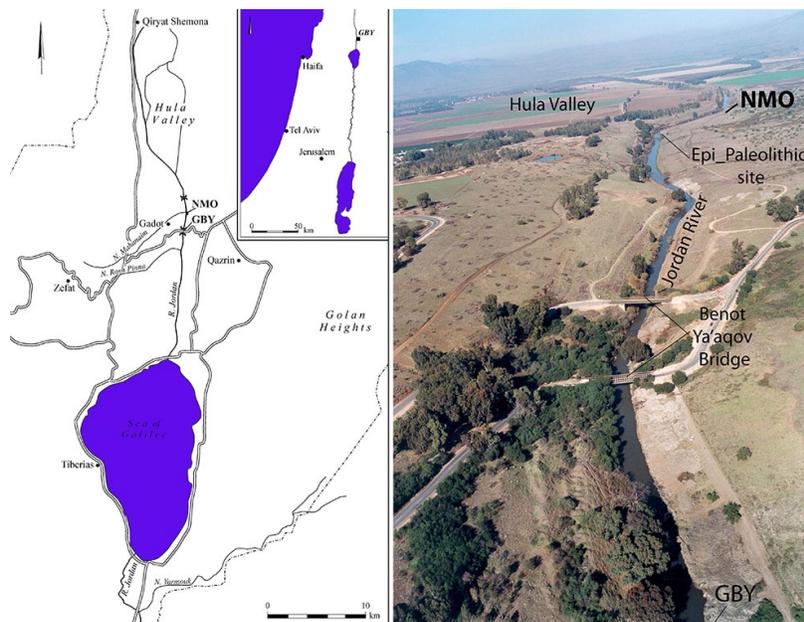
A Week in the Life of the Mousterian Hunter

By Gonen Sharon and Maya Oron

Introduction

During the Middle Paleolithic in the Levant (250-45000 years before present – BP) Mousterian hunters were regularly hunting large game. Yet, our knowledge of their hunting practices, tools and even the location of hunting itself is lacking. Most Levantine Middle Paleolithic (MP) sites are documenting large variety of activities executed at the same place for a long time. But can we take a snapshot of just few days?

Eight seasons of excavation at the Late Middle Paleolithic (MP) site of Nahal Mahanayeem Outlet (NMO) exposed a short-term, open-air hunting camp on the east bank of the Jordan River in the Upper Jordan Rift Valley. The primary data for this period, the final twenty thousand years of human occupation prior to the emergence of the Upper Paleolithic industries at ca. 50,000 years before present (YBP), was retrieved from the famous, multi-layered cave sites of the Levant.



Location of NMO in the Upper Jordan Valley.

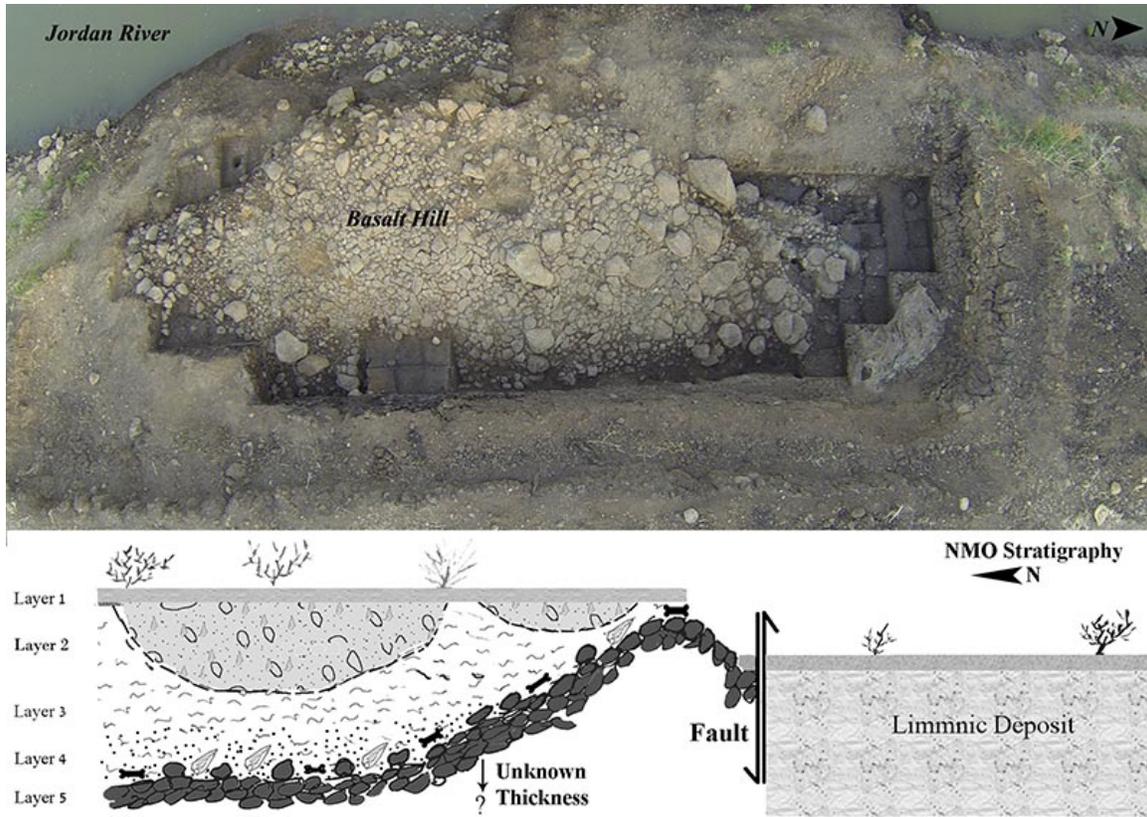
The common features of these cave sites, are their high intensity of occupation. Archaeological horizons at cave sites each represent considerable time and document a large variety of tasks and activities. Cave site layers are also subject to complex post-depositional processes. They provide a wealth of information but have a relatively low resolution of observation. In contrast, the site of NMO yielded information at a uniquely high resolution, enabling us to explore questions that rarely can be asked for Late MP sites in the Levant. It is a snapshot of a short episode in the life of Middle Paleolithic hunters.

The site of NMO was discovered on the east bank of the Jordan River opposite of the the Mahanayeem Stream outlet to the Jordan, ca. 1.8 kilometers north of the Benot Ya'aqov Bridge, as a result of a drainage operation that took place during the winter of 1999.



NMO at the end of the 2014 excavation season. View from south-east.

Stratigraphic, sedimentological and archaeological evidence suggest that the people who occupied NMO found a basalt hill standing some 2 to 2.5 meters above the surrounding landscape, probably on the shore of the Paleo-Hula Lake spreading at the time further south than the historical Hula Lake. The foot of the basalt hill was later covered by fine, silty, dark mud. This mud accumulated rapidly on the bank of the shallow, low energy water body. Between the basalt and the dark mud is the archaeologically layer -Layer 4, comprised of flint tools, animal bones and botanical remains, forming a layer up to 40 cm thick. The layer is OSL dated to ca. 60,000 Years BP.



NMO basalt hill (Layer 5) and stratigraphy.

The data from Layer 4 suggests that it represents a short-term event or, more precisely, a series of two or more short visits to this favorable location. The fauna of the site is rich and includes animals ranging in size from rhinoceros to crabs and birds. The primary animal excavated at the site is the giant aurochs (*Bos primigenius*), weighing over 1000 kilograms.



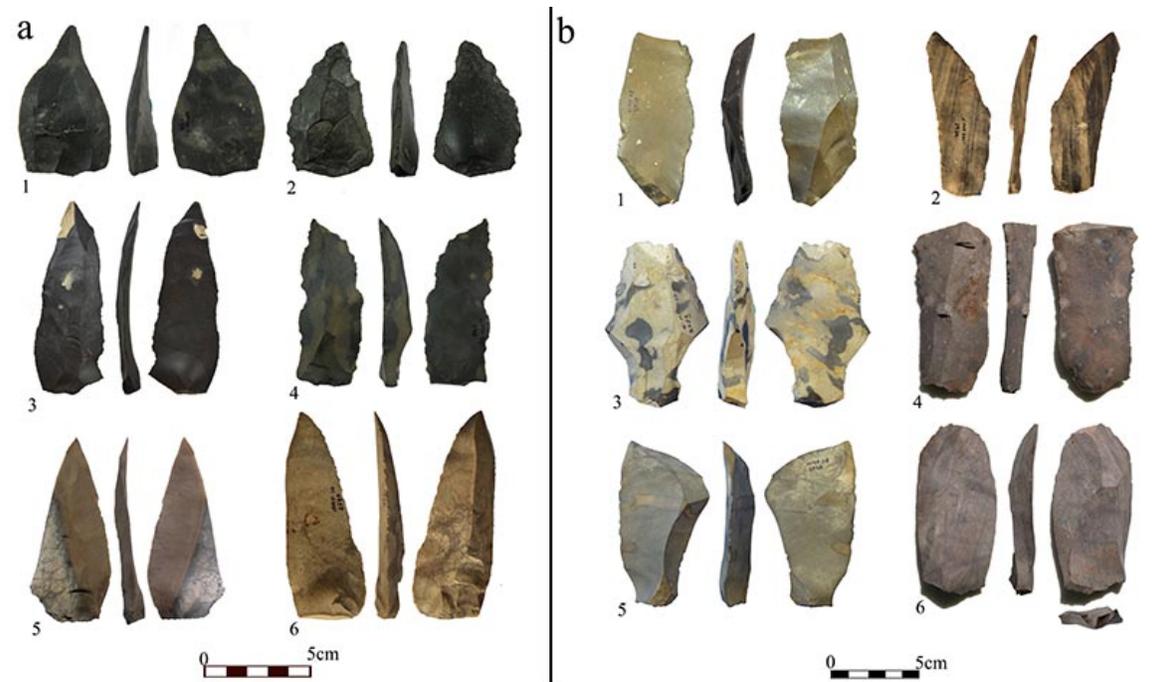
Comparison of modern day cow skull with NMO *Bos primigenius* horn and skull fragment. Note the size of the NMO remains.

Stone tools are found in immediate proximity to the bones, sometimes touching each other, and cut and hack marks are clearly evident on many of the bones. It is interesting to note that many of the large bones were unearthed complete. This is very different from any other MP site in the Levant where bones typically were found heavily fragmented due to human activity.



A complete femur bone of Aurochs during excavation.

Probably the most significant characteristic of the NMO flint tool assemblage is its small size. After eight seasons of excavation at the almost 50 square meters of Area D, we have fewer than 1500 flint artifacts excavated *in situ*. This is an extremely low density, far below any other MP site in the Levant.



NMO flint tools. a. pointed elements; b. cutting elements.

The other unique characteristic of the assemblage is its composition. The percentage of tools within the assemblage is very high, currently about 30%, and it is dominated by cutting tools and pointed elements, many of them of high quality flint. Moreover, the NMO assemblage is unique not only for its frequency of cutting tools and pointed elements, but also for the absence of other tool types typically present in significant numbers in such assemblages. There are very few scrapers, and the same is true for other tool types such as burins, awls, and end scrapers. Refitting of flint elements from NMO allowed us to reconstruct some of the knapping sequences that took place at the site and shed light on the “flint economy” of the Mousterian hunting bands. This unique assemblage resulted from the selection of tools by the site’s inhabitants. The primary task that took place was the butchering of large, hunted game. Pointed elements and cutting tools, the tools dominating the assemblage, were brought into the site for this purpose in addition to chunks of raw material that were knapped on site in a simple but highly efficient reduction sequence.

The type of the humans occupying NMO is unknown. It has been widely accepted that Neanderthals were the dominant species during the final MP in the Levant, but recent data from the Manot Cave suggest the coexistence with anatomically modern humans in the region. The debate over the presence of Neanderthals in the Levant is the topic for another paper. Our analysis shows that the material culture of the NMO people is typically Middle Paleolithic. Yet, its features are modern, if you like, representing a significant advance.

Hunting Large Game

NMO is interpreted as a hunting locality where a group butchered giant cattle. The ability of Late MP Levantine groups to hunt large game is well established. Yet the enormous size of the aurochs that were hunted calls for appreciation of the skills of the NMO hunters. Their actual hunting gear is unknown. Yet the very high percentage of pointed elements enables us to suggest a reconstruction of the hunters' tool arsenal.

We do not know how frequently Mousterians hunted large game, the size of their hunting party, or their hunting practices. The presence of many additional species of animals in the NMO layers, including deer, gazelle, wild boar and even carnivores, such as the skull and femur of a lion (*Panthera Leo*), suggest that we are looking at complex hunting behavior.



Lion (*Panthera leo*) skull, femur and additional bones from NMO. (Photo by G. Larom)

Conclusion

Eight seasons of excavation at the open-air Mousterian site of NMO unearthed a short-term, task-specific, low occupation intensity hunting locality. The evidence suggests advanced hunting behavior of the groups of hunters with excellent knowledge of their environment. They had sophisticated planning, hunting and butchering skills, and they possessed lithic technology that was previously attributed only to later Upper Paleolithic knappers. The NMO hunters carried with them only the tools needed for their specific tasks, enabling us to reconstruct the tool arsenal of the Mousterian hunter.

Whether NMO was occupied by Neanderthals or by anatomically modern humans in the Levant is debatable. But the NMO data help define and understand the behavior and abilities of the final Mousterian groups at the brink of the emergence of modern people in the Levant.

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For further reading:

Sharon, G., 2018. A Week in the Life of the Mousterian Hunter. In: Akazawa, T., Nishiaki, Y. (Eds.), *The Middle and Upper Paleolithic Archeology of the Levant and Beyond*. Singapore: Springer, 35–47.

Sharon, G., Oron, M. 2014. The lithic tool arsenal of a Mousterian hunter. *Quaternary International* 331: 167–185.

Sharon, G., Grosman, L., Fluck, H., Melamed, Y., Rak, Y., Rabinovich, R., Oron, M. 2008. The first two excavation seasons at NMO: a Mousterian site at the bank of the Jordan River. *Eurasian Prehistory* 7: 129–151.