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The Mount Carmel Caves as a World Heritage Site

Las cuevas del Monte Carmelo: Patrimonio Mundial

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Abstract
Mount Carmel Caves, subjected to multi-disciplinary research since the late 1920's, are undoubtedly among the most famous prehistoric sites. The importance of the site's four caves lies in their long cultural sequence incorporating at least 500,000 years of human evolution (from the Lower Paleolithic to the present), paleo-environmental fluctuations, and the unique presence of both Neandertals and Early Anatomically Modern Humans (EAMH) within the same cultural context. The site witnessed important cultural revolutions particularly the Middle Paleolithic burials of both EAMH (the earliest in the world to date) and Neandertals, and the passage from nomadic hunter-gatherers to complex, sedentary agricultural societies. The caves constitute an important heritage site for human cultural and biological evolution within the background of paleo-ecological changes (relevant to bio-diversity management and ecological conservation), the recent history of cave use and the history of archaeological and paleontological research.
The potential for local and international education and community involvement requires integrated educational endeavors considering groups of various ages, religious and social backgrounds, and the scientific community. Maintaining the delicate balance between the various stakeholders, and encouraging mutual recognition and respect, is at the heart of successful management and enhanced heritage value of the site.

Key words: Carmel Caves, Prehistory, Israel, Human Evolution, Culture Change, Community Interaction.

Resumen
Las cuevas del Monte Carmelo han sido estudiadas de continuo y en forma multidisciplinar desde los años 1920 y sin duda constituyen uno de los más importantes sitios prehistóricos del mundo. Está formado por cuatro cuevas y abrigos bajo roca, y su importancia principal está basada en la larga secuencia cultural expuesta, que abarca desde el Paleolítico Inferior hasta el presente, representando por lo menos medio millón de años de evolución humana. Su registro expone varias fluctuaciones paleo-ambientales en una larga secuencia geológica, sedimentológica y antropogénica. Además, el sitio es singular por la presencia única de restos Neandertales y Homo sapiens arcaico. Fue testigo de importantes cambios culturales y revoluciones en el modo de vida de sus habitantes, lo que queda claro en las numerosas sepulturas del Paleolítico Medio con Homo sapiens arcaico, las más antiguas del mundo, y de Neandertales. Además, se registra el paso de la sociedad cazadora/recolectora a la agrícola y sedentaria.
En consecuencia, el sitio es un importante Patrimonio que relata la cultura humana y la evolución biológica, junto con los cambios paleo-ecológicos. Otros aspectos de valor patrimonial, son la historia de la propia investigación arqueológica y paleo-ecológica, así como la interpretación de la biodiversidad actual y la historia etnográfica moderna. La gestión, interpretación y presentación de este Patrimonio ha de considerar variados factores con el fin de asegurar la accesibilidad de un amplio público de diferentes edades, credos y afinidades sociales, así como amantes de la naturaleza, científicos o público en general.

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Palabras clave: Prehistoria, cuevas del Monte Carmelo, evolución cultural y humana, acción social, Israel

1. Introduction

The Mount Carmel Caves, Israel, are undoubtedly one of the most famous prehistoric sites in the world. Figuring prominently in all relevant textbooks dealing with human evolution, e.g., [1], the site has been recently proposed as a candidate for nomination as a World Heritage Site. The site is located ca 20 km south of Haifa (32º 40' 12" N; 34º 57' 55 E"), on the southern cliff of Nahal Meʿarot/Wadi el-Mughara (within the Nahal Meʿarot Nature Reserve), where it opens to the coastal plain and comprises four natural caves and rock-shelters (Figure 1, from west to east): Tabun, Jamal, el-Wad and Skhul. Formed within one of the most completely exposed fossilised rudist reefs in Israel, together they represent a cultural and natural heritage site with significant global interest. The archaeological layers exposed at the site bear witness to a long sequence of human evolution through the major stages of the Stone Age and exhibit the roots of our cultural and evolutionary diversity.

2. Heritage values

Within this context, the unique significance of the Mount Carmel Caves, which makes them worthy of being a world heritage site, derives and is best expressed through the following main points.

2.1. Long cultural continuum and changes in ways of life

The long cultural sequence that is exposed at the four caves and rock-shelters that make up the site extends from the Lower Paleolithic to the present day [2], representing at least half a million years of human evolution (Figure 2). Thus the site has long been recognized as a yardstick for the study of the prehistory of the southern Levant.

Documented within this long sequence are some of the most significant developments in human evolution in terms both of cognition and culture. One is the early existence, within the Middle Paleolithic of the intentional burial of the dead [3]. Significantly, Skhul cave is among the world's first burial sites demonstrating evidence of ritual burial as early as 100,000 years ago [4, 5]. Another issue is the transition from nomadic hunter-gatherers to complex, sedentary communities and the adaptations they were developing which led soon afterwards to the advent of agricultural societies. This is best expressed at el-Wad Cave and Terrace where thick accumulations attributed to the Natufian culture were discovered.

The four main periods represented in the Mount Carmel caves site are the Lower Paleolithic, the Middle Paleolithic, the Upper Paleolithic and the Late Epipaleolithic (Figure 2). Later remains are also present in the caves and terraces but are less dominant.

The importance of the site's long sequence was fully acknowledged following Garrod's excavations [2], as conveyed by the statement of C.N. Johns, the excavator of the nearby Athlit Crusader castle: "*Of the caves to be seen from the road, the lowest [el-Wad] and highest [Tabun] prove to have been inhabited by early man over long periods, the highest first, the lowest last; but the occupation of the latter commenced before the former was abandoned, hence the two caves together give a continuous range of human occupation ... It is rare to find such a range of 'industries' as we have found in these caves, layer upon layer, in such depth and with such a variety of skeletal remains, animal and human*" [6].

The Lower Paleolithic period is best represented at Tabun Cave (Figure 3), with

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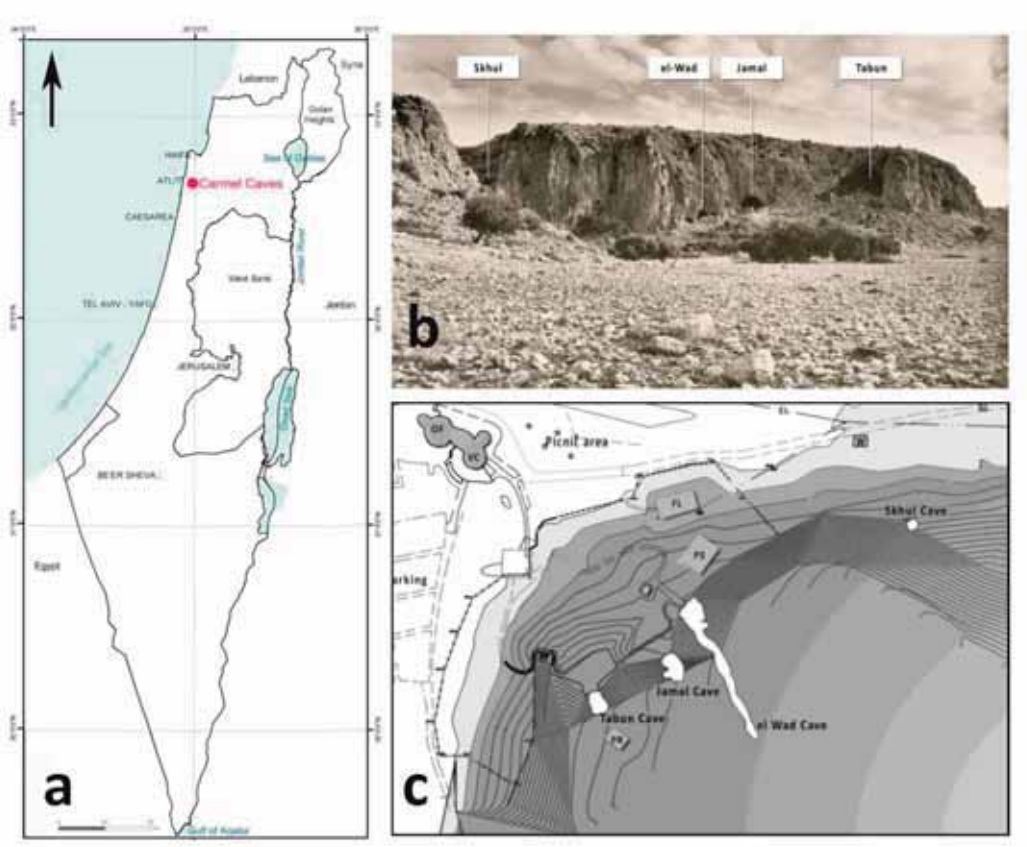

Figure 1. The site: a) Location map; b) general view of the caves at the beginning of the first excavations in 1929 (photo courtesy of IAA archives); c) plan of cliff and caves

some occurrences at Jamal and Skhul. The earliest lithic assemblage in Tabun Layer G was defined by Garrod as Tayacian [2]. This small assemblage encompasses some hand axes and crude flakes and was later ascribed to the Acheulian. The Acheulian industry of Tabun Layer F is specifically associated with the presence of handaxes and scrapers.

An impressive and long Acheulo-Yabrudian sequence (Yabrudian and Amudian) was found in Layer E that contains all the typical characteristic facies of this unique Levantine culture and presents seven meters of archaeological accumulations. While the lithic assemblage ascribed to the Yabrudian facies is dominated by thick scrapers and some hand axes, the Amudian facies, found in one-meter thick accumulations at the top of Layer E, is typically a blade-oriented industry [2, 7]. In this regard, it is worth mentioning Jelinek's suggestion that the entire Lower Paleolithic of Tabun Cave should be regarded as a single cultural sequence (coined the *Mugharan Tradition*) based on the similarities in lithic technology [8].

The Middle Paleolithic is represented by a long Mousterian cultural sequence characterized by the widespread use of Levallois technique at Tabun Cave, at the top of which

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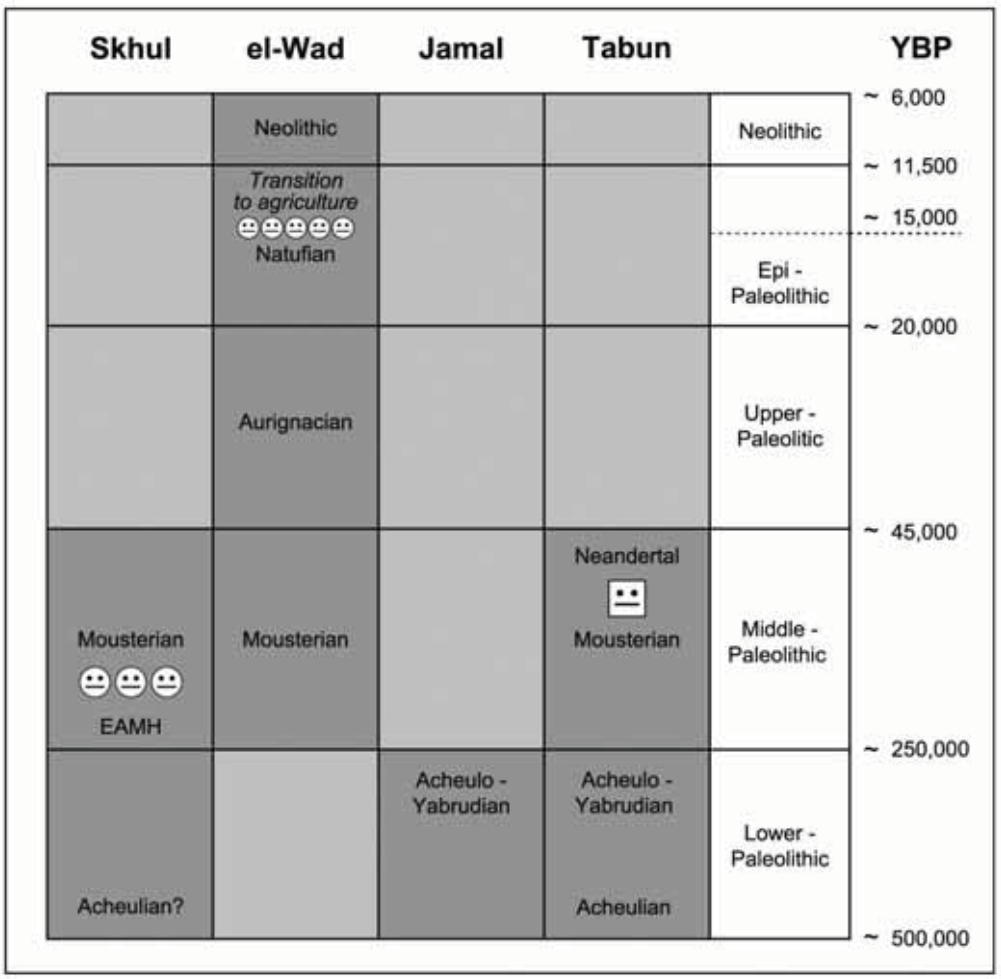

Figure 2. Schematic cultural and chronological framework of the caves

a Neandertal burial was uncovered, and at Skhul Cave with its prolific burials of Early Anatomically Modern Humans (EAMH). Meagre evidence was also uncovered at the bottom of the el-Wad Cave sequence. The Tabun sequence is the only one in the Levant where the three variants of this culture were unearthed, designated Tabun D, Tabun C and Tabun B type industries, differentiated by their techno-typological characteristics, constituting the key sequence for the Middle Paleolithic of the Levant [2, 8, 9].

The Upper Paleolithic was found only at el-Wad Cave. The lithic assemblages here were attributed to the Levantine Aurignacian and provided essential data for delineating the Upper Paleolithic sequence of the Levant [2, 10].

The Epipaleolithic period is represented only by the Natufian (ca. 15,000-11,500 years BP), a culture of complex hunter-gatherers on the threshold of agriculture that culminates the Epipaleolithic sequence. Later prehistoric periods are less well represented.

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Figure 3. The archaeological sequence of Tabun Cave (photo by R. Yeshurun). G-F, Acheulian; E, Acheulo-Yabrudian (Mugharan); D-B, Mousterian

2.2. Human evolution

A large number of human fossil remains have been found at three of the four caves and adjoining terraces of Nahal Meʿarot. These can be roughly separated into three groups. At Tabun Cave, the complete skeleton of a Neandertal woman, known as "The Woman from Tabun" was discovered by Dorothy Garrod in the 1929-1934 excavation [2]. At Skhul, 11 skeletons of EAMH were

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uncovered by Theodore McCown between 1929 and 1934 [3]. While most Levantine Neandertals are currently dated to ca. 60-50,000 years BP, the Skhul skeletons are dated to ca. 80,000-120,000 years BP [4]. The third and largest group of human remains (at present numbering over 100 individuals) was unearthed in the Natufian cemetery of el-Wad [2, 11, 12].

The site is an exceptional example where both EAMH and Neandertals have been found in the same cave complex (a Neandertal in Tabun Cave and EAMH in Skhul Cave). It is important to emphasize that in the southern Levant Neandertals are later than Early Anatomically Modern Humans (in Europe, where EAMH are absent, the Neandertals are followed by fully modern humans).The occurrence of these two human types within one geographical region and the same Middle Paleolithic cultural entity, the Mousterian, is unmatched anywhere in the world. As the caves of Mount Carmel represent the southern extremity of the Neandertal range, as well as the northernmost known remains of EAMH (Figure 4), this situation is unique to the Nahal Me'arot site, and as such is of outstanding significance to the study of human dispersals and evolution [13].

Both fossil human types are key specimens in the debate concerning the demise of Neandertals and the origin of *Homo sapiens*, as summarized in, e.g., [1]. Together with Qafzeh Cave in the Lower Galilee (some 35 km east of Mount Carmel) Skhul exhibits the earliest ritual burials, including grave offerings (faunal remains and marine mollusks) discovered to date [3, 14, 15].

The Natufian remains are significant for the data they provide concerning demographics, pathologies and ways of life, e.g., [16] of these local groups on the threshold of agriculture. Important insights into symbolic and religious aspects of this culture are offered by the varying burial modes and the wealth of associated artifacts and decorations found within the burial contexts.

2.3. **Paleo-environmental reconstructions**
The many paleo-environmental fluctuations registered in the site's geological and anthropogenic, as well as the zooarchaeological and paleo-botanical sequences [17, 18, 19], can be related to both regional and global climatic changes [8], that encompass fluctuations in humidity, as evidenced by changes in the rich faunal and floral assemblages, and sea-level changes.

Multi-disciplinary research highlights the various paleo-environmental changes and their relationship with the main socio-cultural processes and human impact on ancient environments, e.g., [8, 18, 20, 21].

2.4. Natufian el-Wad: The transition from nomadic hunter-gatherers to complex, sedentary communities
The site of el-Wad Cave and Terrace, the paragon of this unique Levantine entity, was the first Natufian base camp to be explored within the culture's Mediterranean 'core area' and the culture was largely defined by Garrod, following her 1929-1933 excavations [2, 22, 23]. The length and extent of the excavations at el-Wad (both cave and terrace) makes this site one of the most intensively excavated Natufian sites, which has yielded rich assemblages of material culture including hundreds of thousands of flint items, dozens of stone tools made mainly of basalt, numerous bone tools, art and decorative items, ochre, as well as a wealth of faunal remains and mollusks [2, 11, 24, 25, 26]. This key site incorporates the complete Natufian sequence – from its earliest appearance to its final stages, documenting the transition from hunter-gatherers to sedentary communities on the threshold of agriculture [11, 27, 28]. As characteristic of large semi-sedentary or sedentary Natufian

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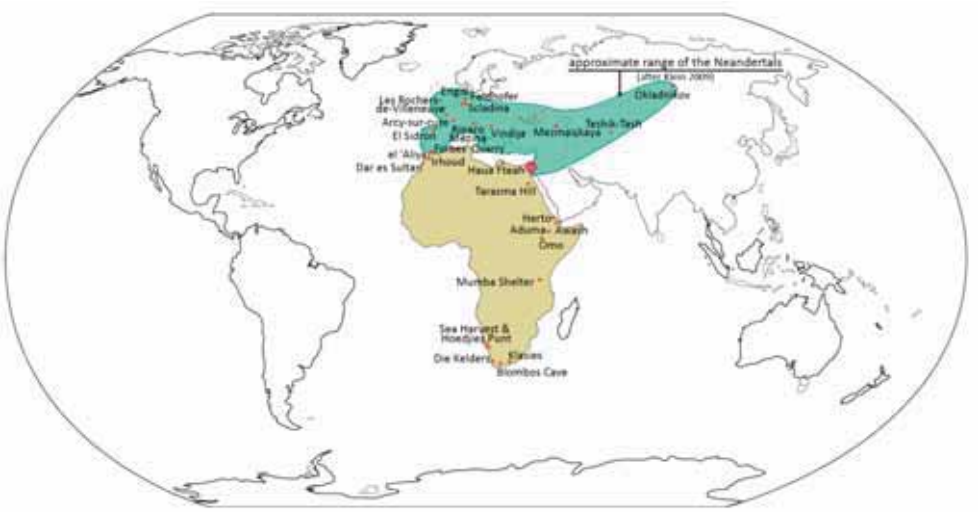

Figure 4. Overlap of Neandertal and EAMH approximate ranges (based on [1])

hamlets, the site displays stone-built architecture, rock-cut installations and numerous graves (Figure 5).

The Natufian cemetery of el-Wad contains more than 100 individuals, interred in a variety of burial modes [2, 12]. This is the richest and most diverse Natufian cemetery ever found, testimony to the complex social organization of the last hunter-gatherer society and the various adaptations it underwent prior to the adoption of agriculture, e.g., [29, 30]. In many respects, the extensive Natufian occupation of the site signals the transition from Paleolithic to Neolithic ways of life, from plant gathering and animal hunting to plant and animal-domestication and husbandry.

2.5. History of research

The outstanding archaeological value of the site of Nahal Me'arot was first realized in 1928. The government of the British Mandate over Palestine had decided to construct a new deep-water harbour at Haifa, for which the cliffs of Wadi el-Mughara were considered a potential quarry. As the Department of Antiquities was already aware of the potential historic significance of the area due to the plain visibility of the caves themselves, and the 'flints and flakes in large numbers [which] cover the slopes' [31], C. Lambert, Assistant Director, was dispatched to investigate the site. Three weeks of trial excavations at el-Wad Cave during November 1928 yielded a wealth of flint and bone implements, querns, beads, stone structures and human remains [12]. The most striking find was a bone sickle haft, carved in the shape of a young animal, which was the first example of Stone Age art to be published from the Near East. As a result of this first sounding, the British School of Archaeology in Jerusalem together with the American School of Prehistoric Research concentrated their efforts on the Wadi el-Mughara caves, and embarked on seven seasons of excavation from 1929 to 1934, headed by D. Garrod and T. McCown. It was in these formative years that the first archaeologist, Dorothy A. E. Garrod, established the cultural yardstick, which provided the general chrono-stratigraphic framework for the prehistory of the Levant [2]. Dorothy M. A. Bate constructed the first paleo-environmental curve ever drawn for any prehistoric site in the world [17].

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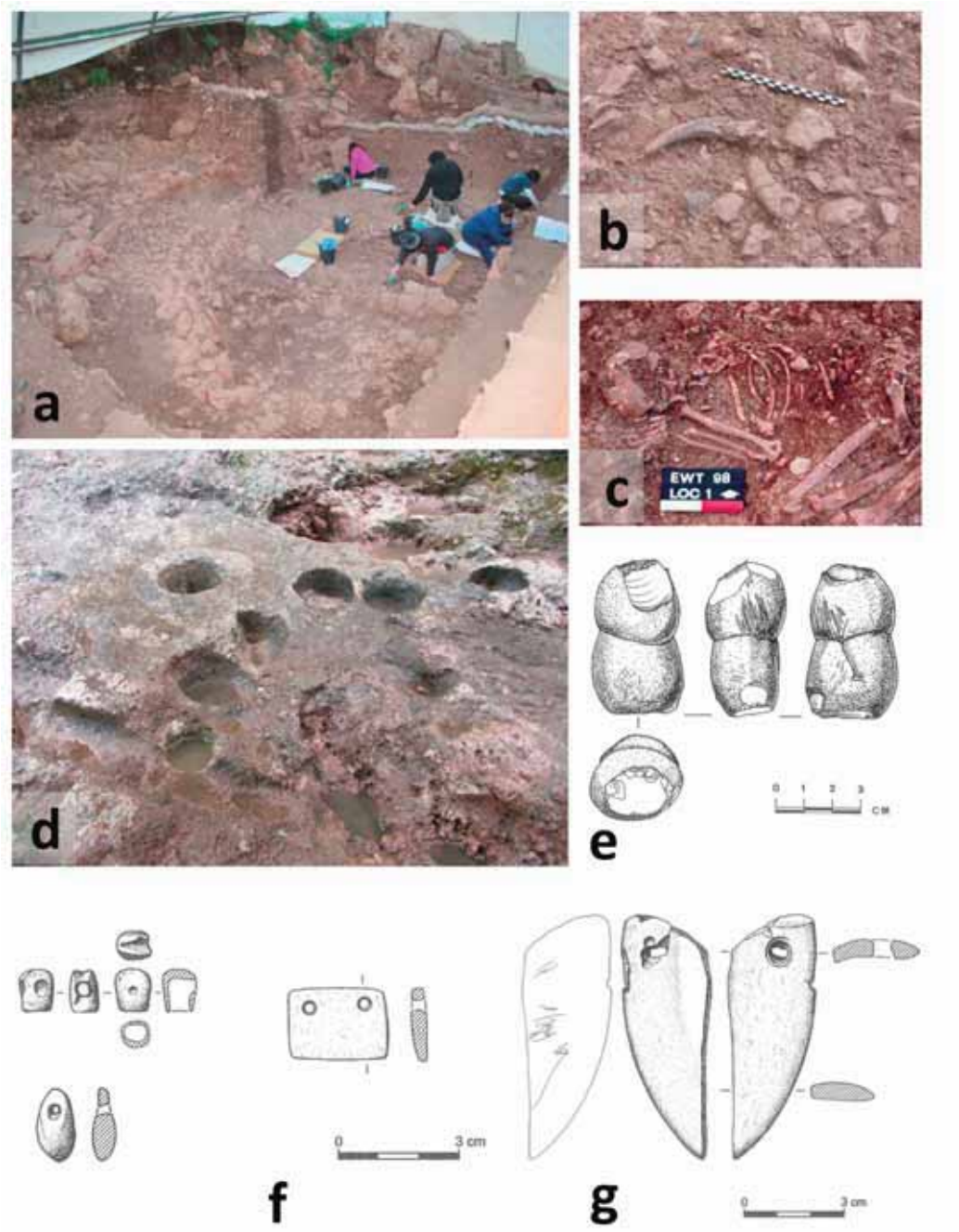

Figure 5. Natufian el-Wad. a) Round structure during excavation; b) living floor with gazelle horns; c) Late Natufian burial; d) rock cut basins; e) human figurine; f) bone beads/pendants; g) bone implement (a, b, d photo by R. Yeshurun; c, photo by D. Kaufman; e) from [34; fig. 58] ; f-g from [11; figs. 16-17]

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In the years that have elapsed since the onset of excavations at the site, it is subject to continuing scientific exploration and research, frequently referenced in relation to archaeological excavations elsewhere. Worth noting are Jelinek's (University of Arizona) and Ronen's (University of Haifa) excavations at Tabun [8, 18, 32]. The extended history of research at el-Wad includes a trial excavation on the terrace [33] and the ongoing excavations of Weinstein-Evron et al. [11, 34] in the cave and on the terrace.

Archaeological, anthropological and environmental researches at the site are among the earliest systematic, multidisciplinary studies carried out. Historically, the excavation and analysis methods have always incorporated all major scientific breakthroughs and advanced technologies in the archaeological sciences and have thus been at the forefront of archaeological practices. This is best expressed by numerous publications dealing with the site, which appears as a key site for studying the chrono-cultural sequence of the Levant and the global scheme of human evolution in most textbooks.

2.6. Natural and environmental values

Nahal Me'arot/ Wadi el-Mughara, with its rudist reef and the multiple caves within it, is a natural landmark clearly visible from the coastal plain which parallels its western slopes, and is of regional geological significance [35]. It provides important insights into the geological history of the area and the formation processes of its caves.

The rudist reef is a geological phenomenon unique in its size and exposure throughout the Middle East. This reef, a typical Upper Jurassic – Lower Cretaceous era phenomenon, is formed by rudist bivalve mollusks and is nowadays found on continental-shelf areas of the same era in the Mediterranean, the Middle East, Southeast Asia, the Caribbean and the Gulf of Mexico.

The caves provide an expansive view of the coastal plain and Mediterranean Sea to the west and of the large variety of environmental settings. Incorporating the Mediterranean maquis, the nearby stream bed, coastal fresh water and saline marshes and the coast itself, these rich settings provided the essential subsistence resources for the prehistoric inhabitants of the region. Because of this ecotonal setting, the site is crucial for an in-depth understanding of various biotopes and their relationships to human-environment sustainable development, bio-diversity management and ecological conservation.

3. Social action and community involvement

The Mount Carmel caves have been occupied in prehistoric times and used by the local shepherds throughout history practically until the first excavations [34]. Thus, they have long been recognized as a local landmark and perceived by local inhabitants as a site of historical significance. This is to be noted especially against the fact that Mount Carmel is riddled with hundreds of caves, many of which contain prehistoric remains. Yet, the site's notable aspect, clearly visible from the coastal plain, together with the considerable length of el-Wad Cave, was particularly associated with the beliefs and superstitions of local groups well into the 20th century:

"*It is also worth noting that this cave [el-Wad] is highly regarded by the local shepherds. Although none of them use, or will willingly enter, the tunnel (which is supposed to be without end) there is considerable competition for the use of the cave itself for wintering their flocks of goats. The reason for this lies in a belief that she-goats here wintered produce twins and never suffer from abortion. There is further evidence that this place preserves in local people's eyes a rather special character; for the slo-*

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ping area between the cliff-face and the enclosing wall was chosen some years ago by a pious individual as a suitable site for establishing a "Sabil" [in Arabic - public fountain], of charitable work, by planting a grove of prickly-pear trees, the fruit of which is free to everyone." [31].

Following a series of excavations and various geological and environmental researches, the caves and their surroundings were declared a National Nature Reserve in 1971, and a protection and development plan was prepared and implemented. With the growing recognition of the site's universal significance, a decision was made to facilitate visitor access and enhance the experience of the site through the presentation of prehistoric life.

It is rather difficult to present the significance and values of prehistoric sites to the public as the remains they offer, usually in the form of chipped stones and bones are mainly comprehensible to professional audiences. These finds hardly leave a lasting impression on members of the general public, and much imagination is required to make the connection between the non-monumental site, the apparently trivial findings, and the historic and scientific story they represent, all this in stark contrast to the uniqueness and rarity of the evidence they bear on the history of mankind. This could offer an explanation to the under-representation of prehistoric sites on the world heritage list [36]. At the Nahal Meʿarot/Wadi el-Mughara site, the existence of prehistoric hominids can be experienced mainly through the attributes of the caves and their environmental context, the impressive stratigraphic section left by the excavators at Tabun and the Natufian architectural remains at el-Wad Terrace. The significant hominid remains and artifacts which have been uncovered at the site during more than 80 years of excavations are on display or in storage off site, in museums and academic institutions around the world.

With this in mind, and in view of the growing recognition of the outstanding value of the site, the Israel Nature and Parks Authority (INPA) undertook a major upgrade of the Nahal Meʿarot Nature Reserve in 1989. This included the fencing of the site, the construction of stairways, paths between the caves, and facilities such as a visitor's center and staff offices. All explanatory measures at the site, such as the stratigraphic display at Tabun Cave (Figure 6), were aimed at promoting awareness of prehistory and enhancing the accessibility of the site to the public.

A considerable part of the guided activity in the Nature Reserve was and still is geared towards young children of kindergarten and early primary school age, as topics related to prehistory are particularly appealing to these ages. Much of the interpretation at the site is aimed at this group, particularly the displays at Jamal Cave, depicting day-to-day family life through life-size figures of children and adults. The display includes reconstructions of wooden and stone utensils, hunted animals, leather processing, and gathered plants. Deep inside el-Wad Cave, some 50 meters from the entrance, the geological history of the caves and the story of the Mount Carmel prehistoric people are presented in audio-visual effects of lights, shadows and sounds followed by a 20 minute movie, considered as the highlight to the visit to the site. The Carmel Educational Guiding Centre located at the site offers the educational training programs on site and at the local schools. It offers the local Jewish and Arab sectors activities relating to prehistoric people, such as making objects from natural materials, "cave fashions", and dramatic reconstructions of prehistoric life (Figure 7).

Since 1994, scientific expeditions have been ongoing in the Natufian hamlet of el-Wad Terrace [11] with the intention of incorporating these into future educational

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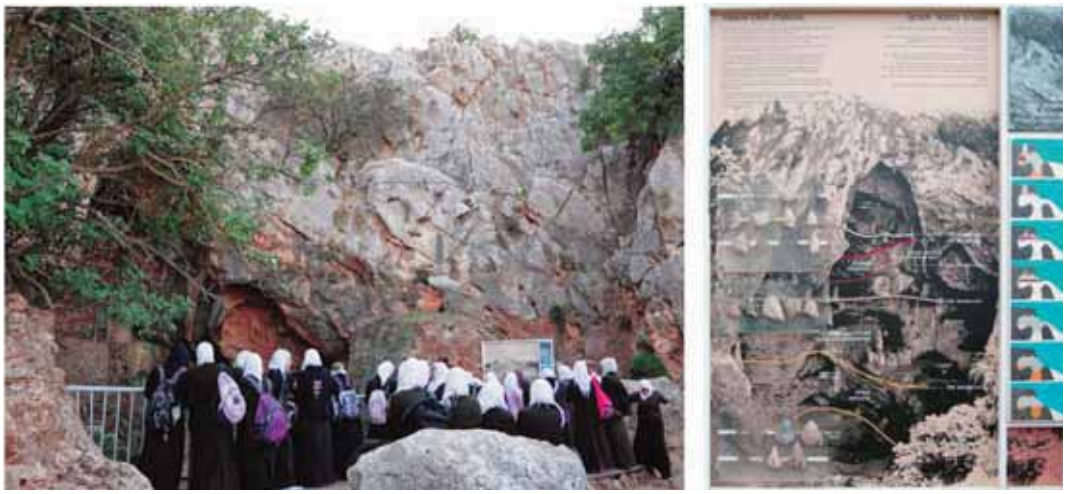

Figure 6 Explanatory sign at Tabun Cave with visitors (photos by Avi Bromberg (left) and R. Liberty-Shalev (right))

and presentation programs. The objective is to highlight aspects such as site organization, architecture, burial practices, symbolic behavior, paleo-environments and subsistence strategies. The results of these intensive multidisciplinary studies are regularly provided to the Israel Nature and Parks Authority, and presented to the Carmel Educational Guiding Centre staff and site guides as part of an annual update. Other public organizations such as Rotary Clubs and tour guide courses have also attended lectures and presentations describing new developments at the el-Wad archaeological excavation.

The State of Israel submitted in January 2011 a nomination for the Mount Carmel Caves to be inscribed as a World Heritage Site. A nomination is always a concerted effort, and this nomination was special in as much as it has been the result of the initiative and driving force of various stakeholders within the local community. Whilst previous nominations submitted by the State of Israel were mostly led by national bodies, such as the Israel Nature and Parks Authority or Israel Antiquities Authority (IAA), this dossier, named Sites of Human Evolution at Mount Carmel: the Nahal Meʿarot/Wadi el-Mughara Caves, was initiated and prepared by the Hof HaCarmel Regional Council (HHRC), with the assistance of the Carmel Drainage Authority (CDA), and the academic support of the University of Haifa, all this in full cooperation with the Israel Nature and Parks Authority.

Accordingly, a Steering Committee of stakeholders headed by the Hof HaCarmel Regional Council was established to facilitate the process of forming the nomination. This committee included representatives from local bodies (the two adjacent villages – Kibbutz Ein Carmel and Moshav Geva Carmel, the University of Haifa, the Carmel Drainage Authority, the local non-profit Carmelim Tourism Organization), and national bodies (INPA, IAA, the Society for the Protection of Nature in Israel, the Society for Preservation of Israel Heritage Sites), which met periodically to discuss and formalize decisions in regard to the site's management and protection. Despite the possible financial implications, the local delegates on the steering committee were

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committed to ensuring that the lands surrounding the site and owned by the adjoining communities remain designated agricultural lands, thus preventing future development.

In the event that the nomination turns out to be successful and the site is inscribed on the world heritage list, this steering committee will become the governing body of the site at the regional level. It will convene regularly to discuss and coordinate the interface between ongoing research, site activities, the local community, national INPA policies, and long term plans.

The nomination process included an evaluation mission to the site by UNESCO's advising bodies, ICOMOS and IUCN. To this end, a visit took place in October 2011, during which members of the local communities convened to discuss the site with the two evaluators. At this meeting some interesting questions were asked and the answers they garnered reveal in part the deep relationship between the site and its surrounding community. When asked if there was interest in repatriating findings (which are presently held at some 40 academic institutions and museums around the world [2]) and developing a museum for their display at the site, two local educators responded emphatically "*no, we don't need a museum to mediate between our environment and ourselves. The real museum is the outdoors all around us; for us the whole area is an open air museum*".

As these interactions make clear, the social action is straightforward in this case – there is a bottom up initiative towards the preservation of the site, which coincides and resonates with the world heritage initiative and fully accords with the UNESCO statement on Social Action and Archaeology in

Figure 7. Dramatic reconstruction of prehistoric life at Jamal Cave (photo by R. Rousseau)

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World Heritage [37]. The inscription was not conceived as a platform for development, nor is there an unrealistic expectation that tourist numbers will change drastically in a way which will transform the local economy. No clear financial gains are envisaged by the people living near the site. Rather, the nomination reflects years of local involvement – academic, as in the case of The University of Haifa; educational (local schools and families); local towns and agricultural communities, and the Carmel drainage authority — an impressive group of stakeholders. The nomination of the site is supported by this population because it enables them to be the protagonists of this process, to play a central role in protecting this site which they value and perceive as their very own heritage asset, and which deserves to be universally acknowledged for its outstanding value.

Significantly, the process of writing this nomination and the communal decision-making it encouraged was a much welcome outcome in itself, arguably more significant in determining the site's future than the inscription itself. It brought together all the obvious and less obvious stakeholders to discuss their values and expectations of the site, to identify areas of responsibility, and to collaborate in order to achieve the shared goal of safeguarding the site.

Naturally, over the years, the relationship between the local community and the site became less immediate, yet whilst the local population nowadays is no longer connected to the site through a system of religious or spiritual beliefs, a strong sense of pride and local identity remains associated with the site. There seems to be great respect for the timelessness of the place, and the sense of continuity it espouses. It remains an acknowledged local landmark, despite the fact that most local residents are not aware of the full scientific significance of site. It would seem that the local population perceives the site as an integral part of their historic environment, the axis around which their identity as the current link in a chain of long term settlement in the area revolves.

4. Conclusions

The Mount Carmel caves are, undoubtedly, among the most well known prehistoric sites in the world, and a key site for the study of human biological and cultural evolution. Their scientific value is largely based on the long archaeological sequence and the impressive history of prehistoric, environmental and anthropological research.

The local community perceives itself as intimately connected to and interacting with the history and landscape of the site. To them, as well as to the wider audience, the site provides a connection to place and time in the form of human heritage that is relevant to all, transcending national, ethnic and religious divides.

This contribution is dedicated to Prof. Mike Turner in appreciation of his long commitment and enthusiastic support throughout.

References

[1] Klein, R. G. (2009): *The human career: Human biological and cultural origins.* Chicago: University of Chicago Press.

[2] Garrod, D. A. E, & Bate, D. M. A. (1937): *The stone age of Mount Carmel: Excavations at the Wady el-Mughara,* Vol. I. Oxford: Clarendon Press.

[3] McCown, T. D. (1937): Mugharet es-Skhul: Description and excavations. In D. A. E Garrod, & D. M. A. Bate (Eds.), *The Stone Age of Mount Carmel: Excavations at the Wady el-Mughara*, Vol. I. (pp. 91-112). Oxford: Clarendon Press.

[4] Grün, R., Stringer, C., McDermott, F., Nathan, R., Porat, N., Robertson, S.,

Actas del Primer Congreso Internacional de Buenas Prácticas en Patrimonio Mundial:Arqueología 202-217

ISBN: 978-84-695-6782-1

Taylor, L., Mortimer, G., Eggins, S., & McCulloch, M. (2005): U-series and ESR analyses of bones and teeth relating to the human burials from Skhul. *Journal of Human Evolution* 49: 316-334.

[5] Mercier, N., & Valladas, H. (2003): Reassessment of TL age estimates of burnt flint from the Paleolithic site of Tabun Cave, Israel. *Journal of Human Evolution* 45: 401-409.

[6] Johns, C. N. (1947): *Prehistoric caves at Wadi el Maghara* (unpublished manuscript, Office Copy III). Jerusalem: Government of Palestine, Department of Antiquities.

[7] Shimelmitz, R. (2009): *Lithic Blade Production in the Middle Pleistocene of the Levant*. Unpublished Ph.D. in Archaeology. Tel Aviv: Tel Aviv University.

[8] Jelinek, A. (1982): The Tabun Cave and Paleolithic man in the Levant. *Science* 216: 1369-1375.

[9] Copeland, L. (1975): The Middle and Upper Paleolithic of Lebanon and Syria in light of recent research. In R. Wandorf & A. E. Marks (Eds.), *Problems in prehistory. North Africa and the Levant* (pp. 317-356). Dallas: SMU Press.

[10] Belfer-Cohen, A., & Goring-Morris, N. (2003): Current issues in Levantine Upper Palaeolithic research. In N. Goring-Morris & A. Belfer-Cohen (Eds.), *More than meets the eye: Studies on Upper Palaeolithic diversity in the Near East* (pp. 1-12). London: Oxbow books.

[11] Weinstein-Evron, M., Kaufman, D., Bachrach, S., Druck, D., Groman-Yaroslavski, I., Hershkovitz, I., Liber, N., Rosenberg, D., N., Bar-Oz, G., Bar-Yosef Mayer, D., Chaim, Tsatskin, A., & Weissbrod, L. (2007): After 70 Years: New excavations at the el-Wad Terrace, Mount Carmel, Israel. *Journal of the Israel Prehistoric Society* 37: 37-134.

[12] Weinstein-Evron, M. (2009): *Archaeology in the archives: Unveiling the Natufian culture of Mount Carmel*. ASPR, American School of Prehistoric Research Monograph Series. Boston: Brill.

[13] Gamble C., & Stringer, C. (1997): *Potential fossil hominid sites for inscription on the world heritage list: A comparative study.* ICOMOS.

[14] Vanhaeren, M., d'Errico, F., Stringer, C., James, S. L., Todd, J. A., & Mienis, H. K. (2006): Middle Paleolithic shell beads in Israel and Algeria. *Science* 312: 1785-1788.

[15] Bar-Yosef Mayer, D. E., Vandermeerch, B., & Bar-Yosef, O. (2009): Shells and ochre in Middle Paleolithic of Qafzeh Cave, Israel: Indications for modern behavior. *Journal of Human Evolution* 56: 307-314.

[16] Bachrach, N., Hershkovitz, I., Kaufman, D., & Weinstein-Evron, M. (in press): The last Natufian inhabitants of el-Wad Terrace. In: O. Bar-Yosef, & F. R. Valla (Eds.). *The Natufian culture in the Levant II*. International Monographs in Prehistory, Ann Arbor.

[17] Bate, D. M. A. (1937): Paleontology: the fossil fauna of the Wadi el-Mughara caves. In D. A. E Garrod, & D. M. A. Bate (Eds.), *The Stone Age of Mount Carmel: Excavations at the Wady el-Mughara*, Vol. I. (pp. 137-240). Oxford: Clarendon Press.

[18] Jelinek A. J., Farrand W. R., Haas G., Horowitz, A., & Goldberg P. (1973): New excavations at the Tabun Cave, Mount Carmel, Israel, 1967-1972: A preliminary report. *Paléorient* 1:151-183.

[19] Weinstein-Evron, M. (1994): Biases in archaeological pollen assemblages: Case-studies from Israel. *American*

ISBN: 978-84-695-6782-1

Association of Stratigraphic Palynologists (AASP) Contributions Series 29: 193-205.

[20] Bar-Oz, G. (2004): *Epipaleolithic subsistence strategies in the Levant: A zooarchaeological perspective*. American School of Prehistoric Research (ASPR) Monograph Series, Boston: Brill.

[21] Lev-Yadun, M., & Weinstein-Evron, M. (2005): Modeling the influence of Natufian el-Wad on the forest of Mount Carmel. *Journal of the Israel Prehistoric Society* 35: 285-298.

[22] Garrod, D. A. E. (1932): A new Mesolithic industry: The Natufian of Palestine. *Journal of the Royal Anthropological Institute* 62: 257-269.

[23] Bar-Yosef, O. (2002): Natufian: A complex society of foragers. In B. Fitzhugh & J. Habu (Eds.), *Beyond foraging and collecting: Evolutionary change in hunter gatherers settlement systems* (pp. 91-147). New York: Kluwer Academic/Plenum.

[24] Bar-Oz, G., Dayan, T., Kaufman, D., & Weinstein-Evron, M. (2004): The Natufian economy at el-Wad Terrace with special reference to gazelle exploitation patterns. *Journal of Archaeological Science* 31: 217-231.

[25] Weissbrod, L., Dayan, T., Kaufman, D., & Weinstein-Evron, M. (2005): Micromammal taphonomy of el-Wad Terrace, Mount Carmel, Israel: Distinguishing cultural from natural depositional agents in the Late Natufian. *Journal of Archaeological Science* 32: 1-17.

[26] Yeshurun, R., Bar-Oz, G., Kaufman, D., & Weinstein-Evron, M. (2012): Domestic refuse maintenance in the Natufian: Faunal evidence from el-Wad Terrace, Mount Carmel. In: O. Bar-Yosef, & F. R. Valla (Eds.). *The Natufian culture in the Levant II*. International Monographs in Prehistory, Ann Arbor (in press).

[27] Garrod, D. A. E. (1957): The Natufian culture: The life and economy of a Mesolithic people in the Near East. *Proceedings of the British Academy* 43: 211-227.

[28] Weinstein-Evron, M., D. Kaufman & Yeshurun, R. (2012): Spatial organization of Natufian el-Wad through time: Combining the results of past and present excavations. In O. Bar-Yosef & Valla, F. R. (Eds.), *The Natufian culture in the Levant II*. Ann Arbor: International Monographs in Prehistory (in press).

[29] Wright, G. A. (1978): Social differentiation in the Natufian. In C. L. Redman, M. J. Bergman, C. V. Curtin, W. T. Langhorn, N. H. Versaggi, & J. C. Wanser (Eds.), *Social archaeology: Beyond subsistence and dating (*pp. 201-223*)*. New York: Academic Press.

[30] Byrd, B. F., & Monahan, C. M. (1995): Death, mortuary ritual, and Natufian social structure. *Journal of Anthropological Archaeology* 14: 251-287.

[31] Richmond, E. T. (1928): *A preliminary note describing the investigations made at the antiquity site at Wady al-Mughara in november, 1928 (incorporating Charles Lambert's excavation report)*. British Mandate Record Files, File 193, el-Wad Mugharat. Jerusalem: IAA Archives.

[32] Ronen, A., Gisis, I., & Tchernikov, I. (2011): The Mugharan tradition reconsidered. In J.-M. Le Tensorer, R. Jagher, & M. Otte (Eds.), *The Lower and Middle Palaeolithic in the Middle East and neighboring regions*. *Études et Recherches Archéologiques de l'Université de* Liège. ERAUL 126, pp. 59-66.

[33] Valla, F. R., Bar-Yosef, O., Smith, P., Tchernov, E., & Desse, J. (1986): Un nouveau sondage sur la terrasse d'El Ouad, Israel. *Paléorient* 12: 21-38.

Actas del Primer Congreso Internacional de Buenas Prácticas en Patrimonio Mundial:Arqueología 202-217

ISBN: 978-84-695-6782-1

[34] Weinstein-Evron, M. (1998): Early Natufian el-Wad revisited. *Études et Recherches Archéologiques de l'Université de Liège (ERAUL)* 77. Liège.
[35] Bein, A., & Sass, E. (1980): Geology. In A. Soffer, & B. Kipnis (Eds.), *Atlas of Haifa and Mount Carmel* (pp. 14-17). Haifa: Applied Scientific Research Co., University of Haifa.
[36] Sanz, N. (Coordinator) (2009): *Prehistory and World Heritage: A Thematic Initiative.* Paris: UNESCO.
[37] *Social action and Archaeology in World Heritage.* http://www.congresopatrimoniomundialmenorca.cime.es/Contingut.aspx?IDIOMA=3&IdPub=640 (accessed 1.3.2012)

ISBN: 978-84-695-6782-1

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