Pegem Journal of Education and Instruction, Vol. 14, No. 4 , 2024 (pp. 485-496)

RESEARCH ARTICLE WWW.PEGEGOG.NET

The Mousterian Site of the Retaimia Cave: Assessment and Perspectives

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Received : 21/03/2024 Published : 01/07/2024

ABSTRACT
In this article, we present a preliminary assessment of the research work carried out in the Retaimia cave south of Chelif in previous years. Limited to prospecting, and to the revision of old data on the cave, collected during the old excavations, In order to answer the problems concerning the characteristics of the archaeological and fauna context and understand the process of the formation of the site (taphonomy of the site) and its function as well as the sequences of continuous or intermittent occupations?
Keywords: Retaimia; Upper Pleistocene; Mousterian; lithic industry; faunas remains.

1. Introduction:

The presence of the Mousterian in North Africa raises a series of issues in light of the existence of Levallois technique industries, which are recognized as true Mousterian cultures in the Maghreb. Despite the rarity of these sites in the literature which may be explained by the fact that many sites were attributed to the Aterian as soon as pedunculated pieces were identified, even if only a single specimen was found a dozen sites distributed across the Maghreb confirm the existence of this culture. Examples include: Cap Ténès (Marchand H., 1934–1935), the site at kilometer 50 between Touggourt and Ouargla (Aumassip G., 1998), Sidi Said in Tipaza (Betrouni M., 2007), El Guettar, Oued El Akarit, Ain Metercham, and Oued el Guatara in Tunisia. In Morocco, three major sites are recognized: Djebel Irhoud, Kifane Bel Ghoumari, and Taforalt (Harbi M., 2007), alongside the Aterian culture, which is widespread in both the North and the Sahara.

How to cite this article: Dr. Oubraham Djouher. The Mousterian Site of the Retaimia Cave: Assessment and Perspectives, Vol. 14, No. 4, 2024, 485-496

Source of support: Nil **Conflicts of Interest:** None.
DOI: 10.47750/pegegog.14.04.42
Received : 21/03/2024 Accepted: 24-05-2024
Published : 01/07/2024

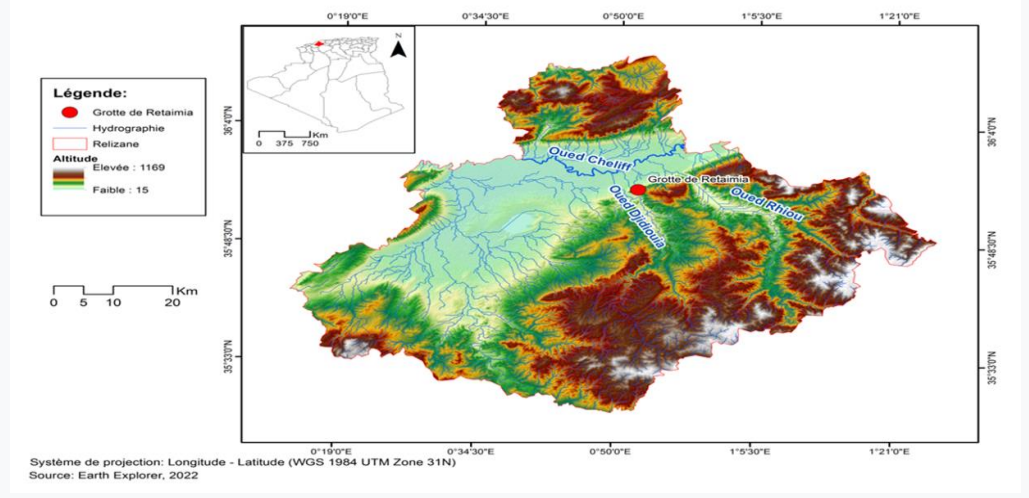
As for the Retaimia Cave, considered a type-site for the Mousterian in North Africa, it holds significant archaeological potential and reveals an industry rich in scrapers and points, attributed to the Middle Paleolithic. It lacks bifaces and pedunculated tools and is associated with a fauna context dating back to the Upper Pleistocene (Dalloni M., 1952).

Through this article, we aim to revisit the archaeological data already reported from this cave in order to address issues concerning the morpho-technological characteristics of this lithic industry, the identification of known animal species in the region, and to understand the formation process of this site from its prehistoric human occupation to its abandonment.

2. Geographical Location:

Retaimia is a prehistoric cave located on the northern slope of Djebel Djourf, in the douar of Retaimia, within the territory of the daïra of Oued Rhiou, in the wilaya of Relizane. It lies between 35°55'51.06" N and 0°52'11.74" E, approximately 2 km east of the commune of Djdiouia, south of the Chelif Valley, at an elevation exceeding 500 meters above sea level (Fig. 1).

Fig. No. 1: Geographical Location of the Retaimia Cave

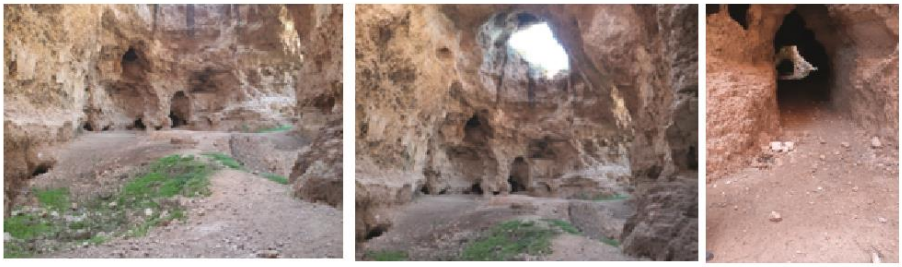


3. Site Description :

The Retaimia Cave is carved into a hill of sandstone limestone. It extends over 150 meters in length, with alternating galleries and corridors. The cave has two entrances, the main one measuring 3 meters wide (Fig. 3), leading into a large chamber oriented north-south, which is 43 meters long, 23 meters wide, and 17 meters high. The floor is composed of limestone beds coated

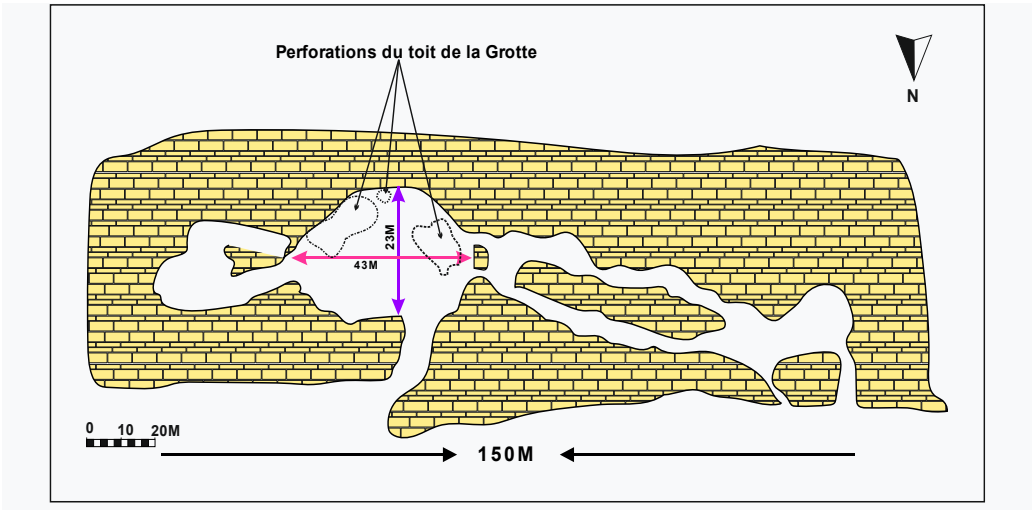
with reddish clay, showing traces of illegal excavations and recent leveling (Fig. 2).

Fig. 2: Interior View of the Main Chamber of the Retaimia Cave



The ceiling features two large openings on the left and right sides. This chamber extends to the right through two dark corridors, each 80 meters long and with a height ranging from 1.5 to 3 meters, leading to a secondary entrance. Another corridor on the left opens into a small chamber that leads onto a cliff wall (Fig. 3).

Fig. No. 3: Sketch of the Retaimia Cave



4. Research History:

The Retaimia Cave was first reported by Pallary P. in 1893, and later by Gsell S. in 1911 in the

Archaeological Atlas of Algeria, sheet 22, no. 4. However, the first archaeological remains discovered at Retaimia date back to the 1950s, during an excavation led by Dalloni M. in 1952. He confirmed the antiquity of the industries uncovered during his excavations, attributing them to the typical Mousterian due to the significant presence of scrapers, Levallois-type points, and described a rich fauna assemblage examined by Arambourg C., characterized by various taxa including bovids, Equus, and gazelles, among others (Dalloni M., 1952). These remain the only witnesses to this significant Upper Pleistocene site.

These findings were revisited by Ballout L. in 1955 (Ballout L., 1955, 1965), and later by Camps G., who studied the lithic industries collected and noted many similarities between the Retaimia industries and those of the El Guettar site in Tunisia (Camps G., 1974). Subsequently, Wengler L. took up and published the results of the lithic industry study previously proposed by Texier J. (Wengler L., 1997; Tixier J., 2000).

Since then, all research activities were halted until 2015, when the Department of Culture of the wilaya of Relizane initiated efforts to protect and preserve the cave, which was threatened by quarry operations in the surrounding area. Currently, the site is included in a research project (P.R.F.U.) entitled Quaternary Paleo-Environments and Prehistoric Cultures, led by Mrs. Chaid Saoudi Y. since 2019. Studies and analyses are currently underway to clarify and enhance the archaeological context of the site, despite disturbances to its archaeological deposits.

5. Stratigraphy and Sedimentology of the Site:

The initial observations of the stratigraphic deposits in the Retaimia Cave reveal a substantial infill of Quaternary sediments, measuring approximately 2 to 3 meters in thickness, deposited during the Upper Pleistocene. These sediments accumulated as a result of various processes including rock weathering, erosion, and transport, primarily due to rainwater runoff through fissures and the cave's ceiling. Additionally, debris brought in by

prehistoric humans during successive occupations in the Middle Paleolithic contributed to the sediment build-up.

Unfortunately, this sedimentary fill has been severely damaged and disturbed by recent mining operations carried out at the site in the late 19th and early 20th centuries (Fig. 4) (Pallary, P. 1893), as well as by illicit excavations. These disturbances have prevented the establishment of a reliable stratigraphic profile, making it necessary to conduct test trenches at the base of the main chamber and along the galleries.

Fig. No. 4: Traces of Mining Operations on the Cave Walls Dating from the Last Century

These deposits consist mainly of:

- Rolled limestone blocks resulting from the collapse of the cave ceiling or transported from outside.
- Reddish clay originating from the plateau, brought in by runoff through fissures and the cave ceiling.
- Sand and pebbles agglutinated by calcite or phosphorite.
- Blackish or grayish humus layered over bone remains and lithic industries in the excavated trenches.
- Backfill concentrated in the corridors, containing flint debris and bone fragments.

6. Archaeological Material from the Site:

During the excavations carried out in the 1950s, the Retaimia site yielded lithic archaeological material associated with remains of animals consumed by prehistoric humans of the time. This material consists of:

6.1 Lithic Material:

It is characterized by the presence of a flake-based industry with a Levallois index value of 33 (Aumassip G., 2001: 49). It includes discoidal cores; small points produced from triangular flakes, which may be broad, elongated, oval, or leaf-shaped, with a prepared striking platform. The retouch is oblique on one side and visible on the face opposite the point of percussion, with no evidence of inverse retouch.

Scrapers dominate in both quantity and variety, comprising 66% (Aumassip G., 2004: 134). These include straight, convex, convergent, and transverse scrapers, with regular and rectangular outlines, fashioned on flakes with faceted striking platforms. The percussion bulb is often preserved, indicating shaping with a hard hammer. There are also scrapers of various shapes, some showing minimal retouch.

Blades are rare. Notches and denticulates account for 15%, while points represent 8% (Aumassip G., 2004: 134). These typological indicators, based on earlier collections from disturbed backfill and deposits, do not allow for precise quantitative values or characteristics to be established. A comprehensive reassessment of all archaeological material is therefore required.

Fig. No. 5: Lithic and Bone Tools from the Retaimia Cave

6.2 Raw Material:

The presence of flint nodules in the surrounding area confirms

the use of local raw materials, sourced within two kilometers of the site occupied by prehistoric humans. Flint was available in the form of pebbles and blocks from alluvial deposits, brought by the major rivers Oued Rhiou and Oued Djdiouia, which flow through the upstream plains. Approximately 90% of the archaeological material collected was crafted from black, gray, and brown flint (Aumassip G., 2004: 134), as well as light or dark quartzitic sandstone.

6.3 Fauna Remains:

The faunal assemblage recovered from the Retaimia Cave highlights the significance of large African wild game likely hunted by prehistoric humans of the time. The identified species include:

- Bovinae (Bos primigenius)
- Alcelaphinae (Alcelaphus buselaphus, Connochaetes taurinus)
- Antilopinae (Gazella cuvieri, Gazella dorcas)
- Rodents and birds.

7. Results and Discussion:

Initial observations of the lithic material, which exhibits morpho-technological variations and deliberate selection of raw materials, confirm an adaptation by humans to climatic changes and to their daily needs. This is evidenced by the evolution of material cultures, the management and procurement of raw materials, and the tendency to select hard rocks such as flint, as well as the transformation of bone for tool production.

Given the current state of knowledge, it is difficult to determine the precise chronological position of the Retaimia site. However, the characteristics of its lithic industry link it to the Middle Paleolithic, with a Levallois index and a predominance of scrapers and points, a few denticulates, and the absence of bifaces and pedunculated pieces—traits proposed by F. Bordes as characteristic of the Ferrassie-type Mousterian (Aumassip G., 2001b), known in Europe (Bordes F., 1981) and at some North African sites that present stratigraphic sequences

distinguishing between the Mousterian and the succeeding Aterian. This is despite the presence of one or more pedunculated pieces in most cases (Bordes F., 1976/1977).

This interpretation is supported by excavation results from several sites attributed to the Mousterian, such as Rhafes Cave in Morocco (Wengler L., 1986, 1995, 1997), the Brezina site (Aumassip G. and Estorge P., 1982), Sidi Said in Algeria (Batrouni M., 1997 / 2021), and El Guettar (Camps G., 1974), Sidi Zine and Ain Metercheme in Tunisia (Hajri Messaoudi S., 2011).

Furthermore, current data do not allow us to confirm the absence or presence of cultural traces dating after the Middle Paleolithic in the cave. This may be due to the disappearance of evidence of more recent occupations as a result of 19th- and 20th-century mining activity, or to the abandonment of the site by prehistoric humans when it became uninhabitable due to roof collapse or climatic changes.

7.1 Indicators of Paleo-Environments:

The ongoing study of the bone remains of large and small Quaternary mammals from the cave (Chaid Saoudi Y. et al., in progress), consisting of several continental species, indicates a temperate and humid climate. This environment was marked by the presence of wooded savannas, grassy plains, and significant watercourses within the Chelif Basin to the north, and its tributaries Oued Rhiou and Oued Djdiouia.

Preliminary observations of the fauna list found at this site confirm the presence of continental species known from the Lower Paleolithic across North Africa, such as Bos primigenius, also reported at Ternifine in Mascara. Other taxa, dating to the Upper Pleistocene, have been found near the Algerian coast (Sidi Said, Allobroges, and Ain Beniane) (Chaid Saoudi Y., 2019), in caves of the Constantine region, at Bir El Ater, Oued Djebana in the east, and throughout the Oran region extending as far as Morocco to the west.

These were associated with Euro-Asiatic species that arrived in North Africa during this period, such as

Equus algericus, which has been reported in Aterian sites and persisted into the Holocene, as observed at the site of Columnata in Tiaret (Chaid Saoudi Y., 2012).

7.2 Site Function and Anthropogenic Activities:

It appears that the Retaimia Cave served as a shelter and strategic location due to its geographic position overlooking the Chelif plains, an area surrounded by several permanent watercourses that attracted game. This advantageous location allowed prehistoric humans to hunt various animal species such as bovids, equids, and gazelles.

The density of archaeological deposits comprising accumulations of bone debris and lithic industries attests to long-term, seasonal, or temporary occupations. The presence of anthropogenic activities suggests that human groups gathered in the cave and engaged in various tasks, including: lithic tool production, sourcing raw material (flint nodules) from nearby areas, transporting game hunted in the surroundings into the cave, as well as butchering, disarticulating, and likely fracturing prey.

Based on current knowledge, it is probable that butchering and marrow extraction were practiced by these Mousterian humans though this hypothesis remains to be confirmed by taphonomic and archaeozoological analyses of the faunal remains found in the cave.

The presence of burned bones, ash, and calcined stones within the deposits indicates that meat was cooked in hearths. These activities took place before the eventual abandonment of the site, which may have become uninhabitable due to the collapse of the cave roof or climatic changes.

8. Conclusion:

The preliminary results of the survey and reassessment carried out at the Retaimia site have yielded a set of observations highlighting the archaeological potential of the site. These findings reflect significant periods of occupation by prehistoric humans during the Upper Pleistocene, and can be summarized as follows:

- A Levallois technique lithic industry, similar to the Mousterian known in Europe

and at certain sites in North Africa.

- The presence of continental fauna indicating a humid climate, with wooded savannas, grassy plains, and substantial watercourses in the region.

In conclusion, many questions remain to be answered through further stratigraphic, taphonomic, and morpho-technological analyses, as well as reliable dating methods. These are essential to confirm the antiquity of this Upper Pleistocene site in relation to North Africa, while awaiting more precise data that future test excavations are expected to reveal.

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