Cobrinhos, A New Mousterian Site in Vila Velha de Ródão (Portugal)

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Abstract

Vila Velha de Ródão (Central inland Portugal) is best known for its well preserved open Mousterian campsites such as Foz do Enxarrique (33.6 ka) and Vilas Ruivas (54 ka), which yielded evidences of highly preserved occupational layers with abundant faunal remains (the first) and features interpreted as hearts and windshields (the second). This region is also rich in other periods, namely Acheulean and, during the Holocene, Pre- and historical

another site, Cobrinhos, located at 2,3km upstream from Foz do Enxarrique and 2,5km from the Pleistocene course of the Tagus River. Cobrinhos is an open-air site found in the fall of 2014 during the construction of a new building for a paper factory. The occupation seems to result from a Neanderthal quarry that exploited a dense debris flow from the 400m high quartzite crests located nearby. The original archaeological layer seems to have moved downslope, presently occupying an area of 2500m2.

entradictory to what is usual in open-air sites, there are no remains that can be associated to other time-periods, which suggests a good integrity of the deposit. The assemblage is composed by more than four thousand artifacts, from cores to chips, ~99% in quartzite and ~1% in milky quartz. The cortex present in the artifacts is congruent only with the debris, suggesting an exclusive local exploitation. The industry is typically Mousterian, with predominance of Levallois and Discoidal debitage and abundant retouched tools, suggesting that retouch was desirable and not only a result of edge reshaping. Several sediment samples were taken for geological analysis and absolute dating. Also, the assemblage is presently under study for technological, typological refitting and special analysis.

In short, Cobrinhos represents a novel type-site in Portugal with crucial information to understand Neanderthal ecological and technological behavior.

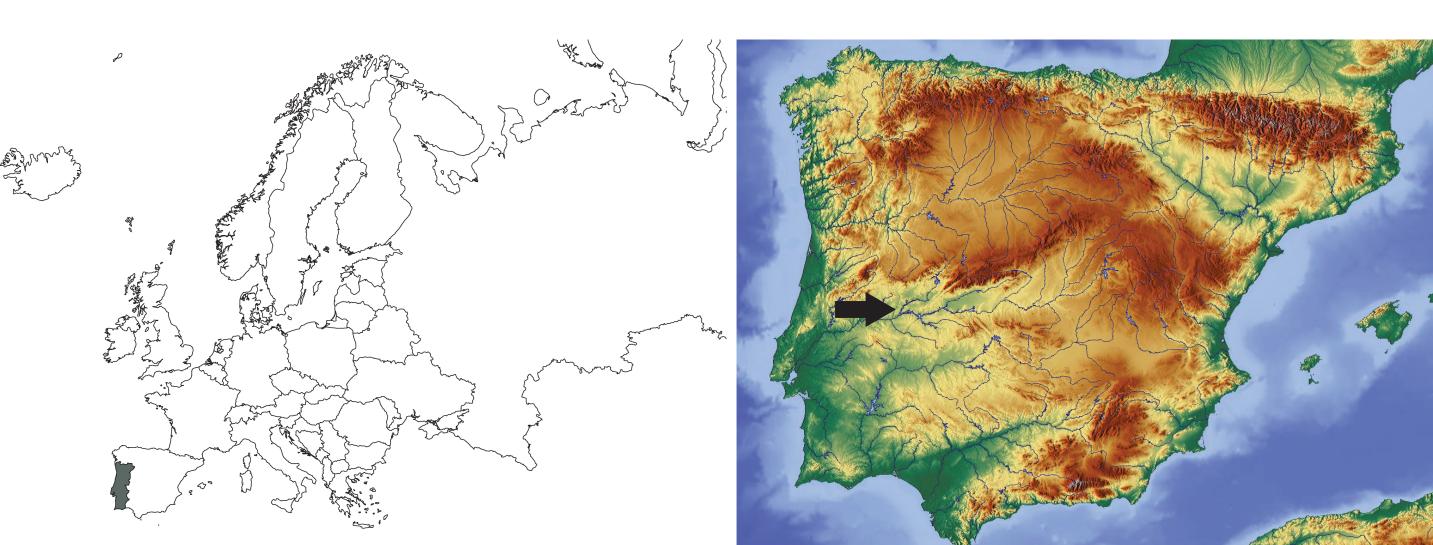
Introduction

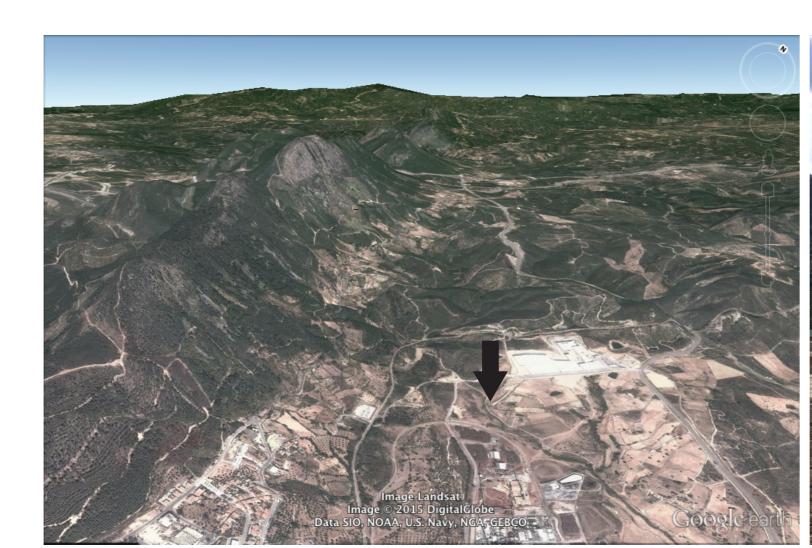
Cobrinhos is an open-air archaeological site found in the fall of 2014 during the construction of a new building for the AMS-BR, SA paper factory. The site is located in the northern margin of the Tagus River, on the last meters of a slop deposit (a possible distal fan) formed by the erosion of the quartzite crests of Portas do Ródão that overlays the Paleogenic arkoses. The entire area of stone-tools dispersion was of 2500 m2 but the major concentration was in "just" 1600m2.

Though the paper company executed all the necessary procedures, for some reason the site was not detected prior to the construction. It was already during the archaeological monitoring of the excavation of the terrain where the new building was going to be constructed that the site was recognized by F. Henriques. This immediately stopped the work in course but there was a significant urge on re-starting the construction, being Vila Velha de Ródão (an inland municipality with 329,91 km²) one of the poorest in the country, with three times more mortality than the national average and the lowest birth record; the last child was born 6 years ago! Within this framework and considering the recent country's bailout, the several million euro investment from AMS-BR, SA was a priority. By this time, the developer had already contracted all phases of the construction and had the new machinery shipped and on its way to Portugal.

The urge was such that the decisions were the highest priority of several ministries and it was necessary to immediately start a collaboration between the archaeological company Emerita, the University of Algarve, the local association Associação para o Estudo do Alto Tejo, the National Archaeological Museum, the City of Vila Velha de Ródão and the AMS-

Our deadline to deliver a diagnostic about the area, thickness, cultural framework, chronology, preservation, relevance and necessary complementary works was 5 days.





Therefore, several decisions were taken:

deposit down to the local bedrock.

were recovered as knapping debris.

European protocol, using a E4 database.

neither sub-divided the geological layers in spits.

1- All area was divided in an arbitrary alphanumeric grid of 10 x 10 meter.

meter (= 3,14m2) in each vertices to perform a very intensive survey.

2- Each 100m2 unit was surveyed extensively in order to understand the surface density.

3- The presence of very small implements, including chips, led us to delimit a radius of 1

4- A trench perpendicular to the platform with 45 x 2 meter and a maximum depth of 2,5

meter was opened with a bulldozer in order to recognize the stratigraphic sequence of the

5- With these data, we opened 15m2 of test pits in order to get high-detailed information.

The set of data collected prior to the test pits allowed us to understand that we were

facing an off-site dense archaeological deposit, thus we did not piece plot the artifacts

The excavation team was divided into 3 lined sections: one of excavators, excavating the

sediments following the geological layers; another of screeners using a 5 mm mesh and

water to wash the sediment and dump the screened remains into a large tarp where a

third group of people was sorting the artifacts from the natural debris, collecting samples

of 10 liter of debris to get the quartzite/quartz ratio and to also build a more accurate

quantification of small implements. Due to the nature of the site, only small flakes were

Several geological samples for further analysis, including OSL dating, were also collected.

The lithic assemblage has been studied using the traditional techno-typological western-

considered and recovered as chips. Also, only the fragments with clear knapping features

Methods I

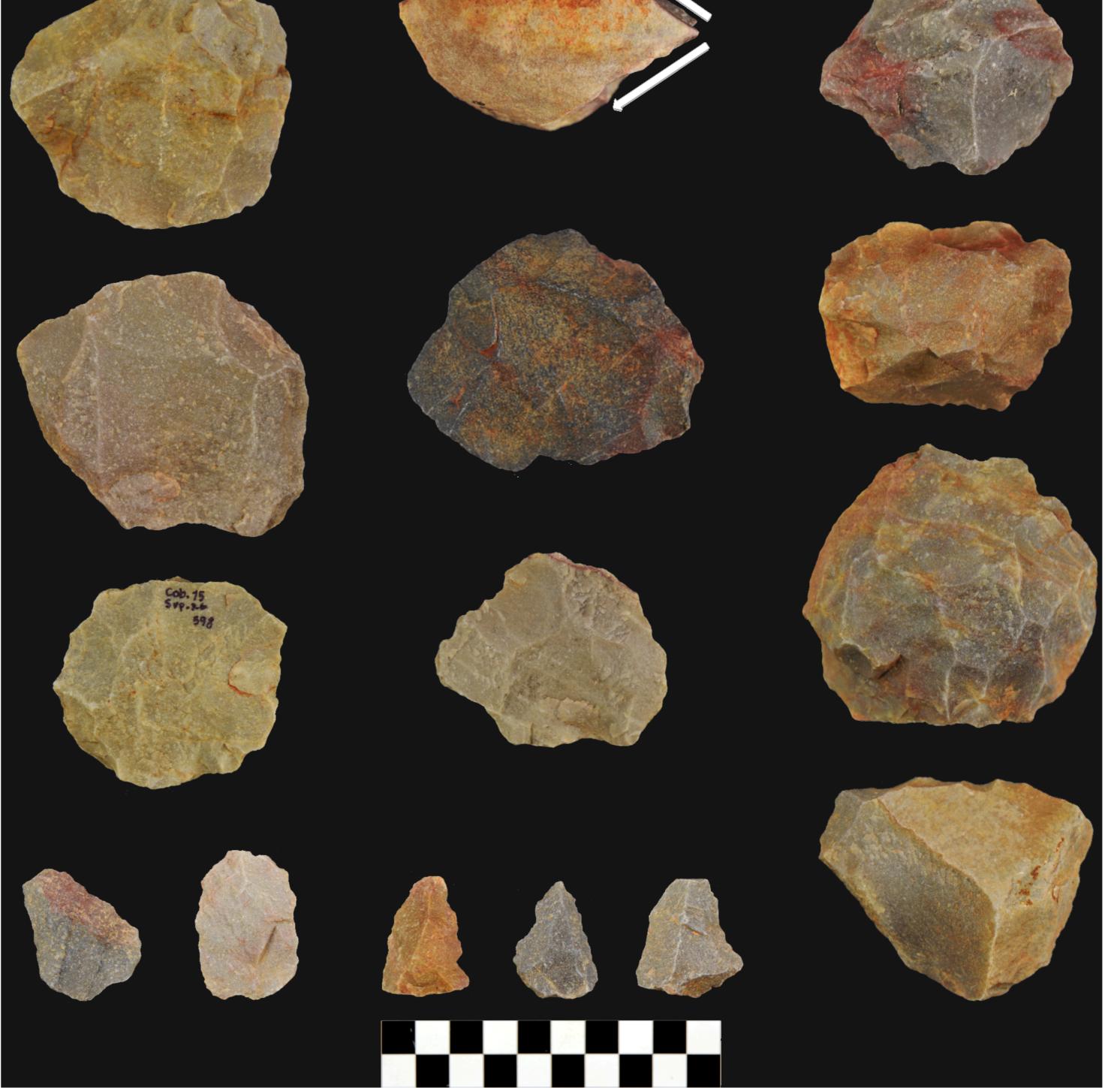


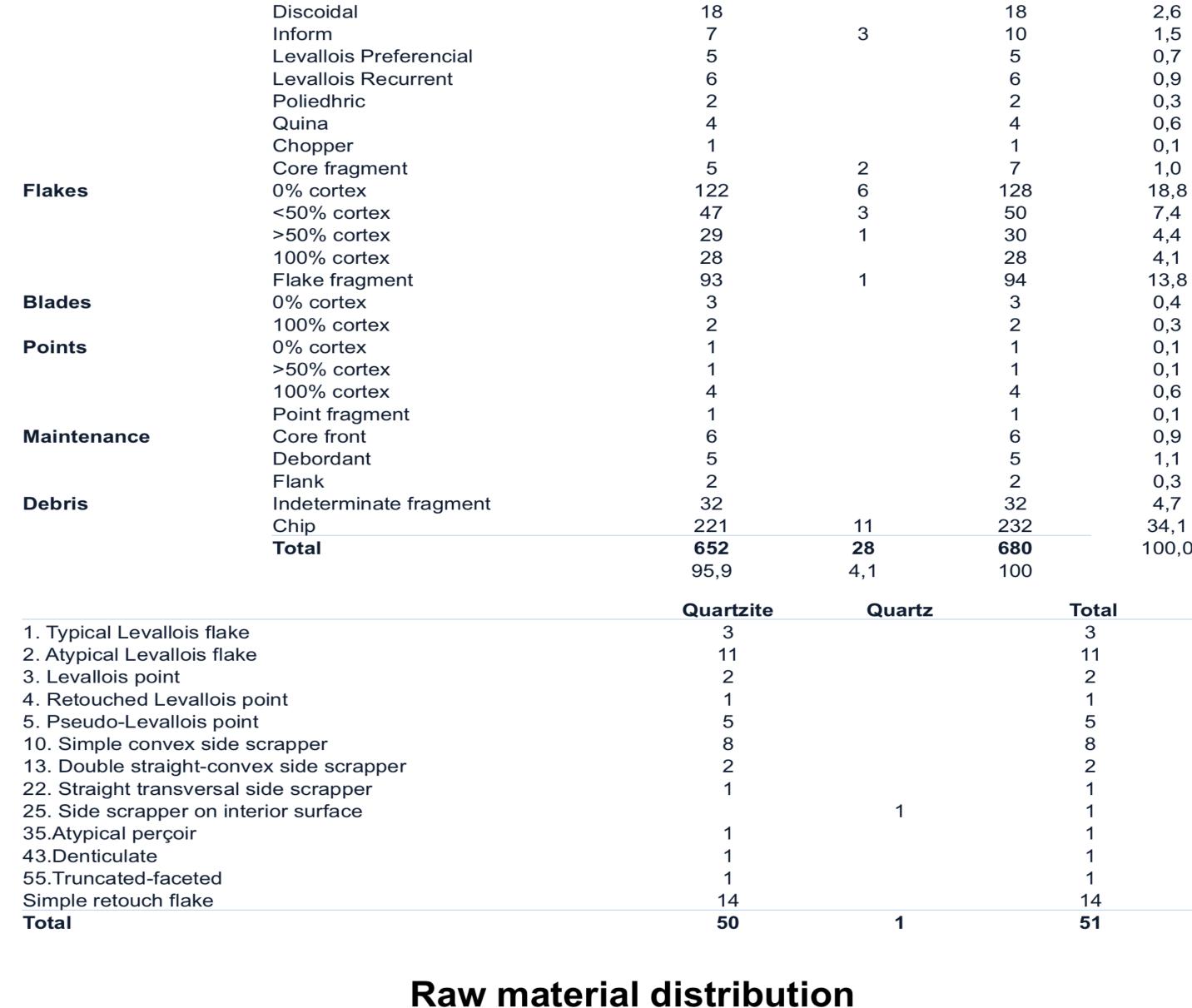












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Based on these results the Portuguese Heritage Institute decided that the manual represent a final amount of around 60,000 artifacts. excavation of smaller areas across the platform would imply the discard of a great quantity of artifacts. Therefore, despite the apparent absence of an in situ highly-preserved deposit, the amount of artifacts along with the presence of small implements justified the entire excavation of the 1600m2 area of the site where the concentration of stone-tools was higher. This would represent a volume of approximately 600m3.

Considering the archaeological deposit, the volume and the investment, it was also decided that the only feasible solution was to move the site to another place and recover the greatest amount of artifacts possible, including chips, within each 10 x 10 m square and the 20 to 60 cm thickness deposit. The deadline to remove the site was 1 week while the deadline to finish the following fieldwork was 3 months.

The 1600m2 area was carefully excavated with a bulldozer operated by an exquisite professional highly experienced in archaeological works, in a gigantic decapage process, following the 10 x 10 m units and the 20 to 60 cm deposit. The sediments were placed into trucks, each load receiving a tag with the unit information and then pilled in an adjacent area. Each pile received the alphanumeric code of the unit and the trucks were counted, having each one around 9m3. Once this process was finalized, a smaller machine carried the sediments from each pile to screens specially built for this task.

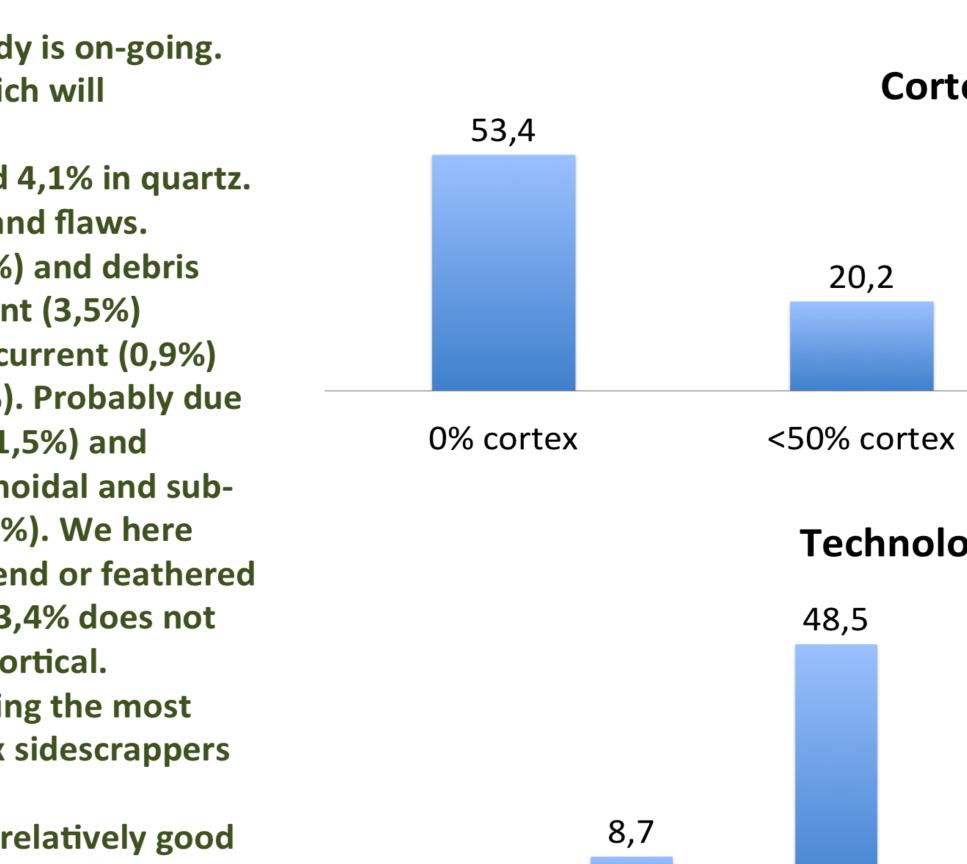
As happened during the testpitting but now in a larger scale, the sediments were washed and unload from the screens for sorting. As each pile was finally screened, the screens were moved aside. This allowed to always have the original piles, the screening area and the screened remains separated, clean and isolated from the others.

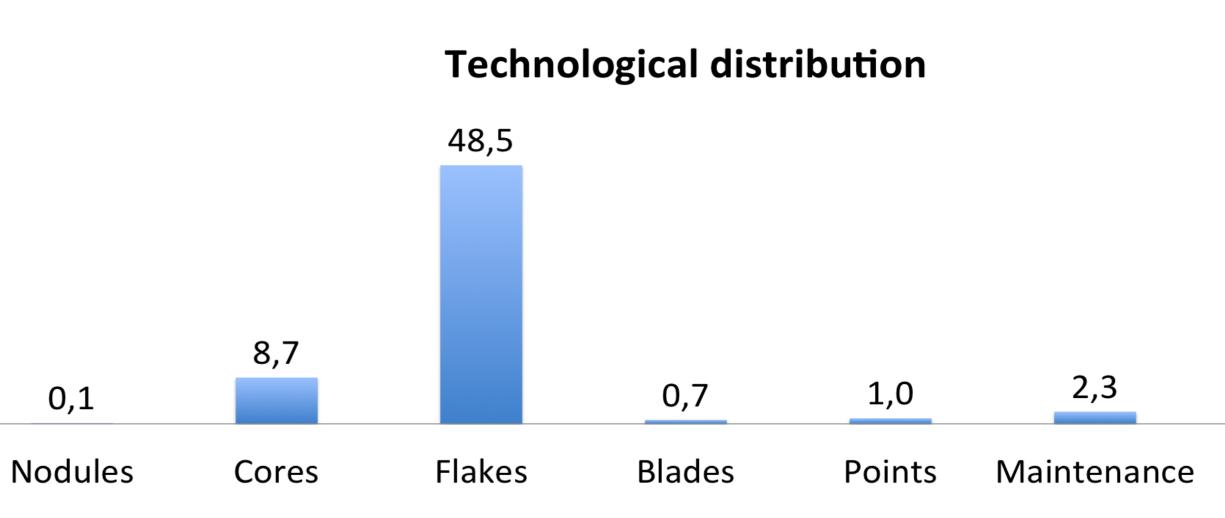
Presently, the screening process is being finished while the sorting and study is on-going. We estimate to have a density of around 100 artifacts per cubic meter, which will

The assemblage presently studied is of 680 artifacts, 95,9% in quartzite and 4,1% in quartz. Quartz is always milky but quartzite presents differences in texture, color and flaws. Flakes are the most common implements (34,7%), followed by chips (34,1%) and debris (19,7%). Cores show a wide range of reduction strategies such as Convergent (3,5%) including Discoidal (2,6%) and Centripetal (0,9%); Levallois (1,6%), both Recurrent (0,9%) and Preferential (0,7%) and, for the first time ever in Portugal, Quina (0,6%). Probably due to the nature of the site, there is also a considerable frequency of Inform (1,5%) and Poliedric (0,3%) cores, resulting from the opportunistic use of natural prismoidal and subangular clasts. Blanks occur as flakes (34,7%), blades (0,7%) and points (0,9%). We here considered as points the blanks with convergent edges and pointed distal end or feathered distal end with less than a third of the butt. In what concerns the blanks, 53,4% does not have cortex, 20,2% has <50%, 12,6% has > 50% and 13,8% are completely cortical. The tool assemblage is composed by 51 implements (7,5% of the total), being the most common retouched flakes (14), atypical Levallois flakes (11), simple convex sidescrappers (8) and Pseudo-Levallois points (5).

Our preliminary results confirm the association to the Mousterian and the relatively good preservation of the site, based on the frequency of chips. Nevertheless, most artifacts present patina which is expected considering the nature of the deposit and the exposure. Of course, this assemblage has to be thoroughly analyzed in many aspects, including in the attempt of separating, as good as possible, the formation of edge damage caused by retouch and by trampling.

Preliminary Results





Cortex frequency



Quartzite





>50% cortex

Quartz



100% cortex