Agia: An Open-Air Middle Paleolithic Site in Northwestern Greece

Stephen A. Spathas

Abstract: The pause in scientific research in the prehistory of Corfu and adjacent areas in Epirus between the years 1969-1990 prompted exploratory field research to locate and record open-air Paleolithic sites threatened by destruction due to residential, commercial, and industrial development. Of the sites discovered and put on record, this paper focuses on Agia (or Ayia), a hitherto unknown Middle Paleolithic site, and examines its position as a probable "kill and butchering" site in the Kokkytos river area. The typological analysis of the lithic assemblage shows an advanced Middle Paleolithic industry of Mousterian and, predominantly, Levalloiso-Mousterian types of Levalloisian tradition with elements of Eastern Mousterian affinities. The paper discusses the diffusion of technology in the coastal areas of Epirus and the island of Corfu and notes the gradual decrease of pure Mousterian technology in favor of Levalloiso-Mousterian as one moves westwards. The paper points to specific candidate sites in the vicinity of Agia and recommends further research.

Keywords: red beds, Epirus, Middle Paleolithic, flints, Levalloiso-Mousterian

Independent Researcher, spstephen@yahoo.com
0000-0002-5375-9091
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Introduction

Prior to 1962, little had been known about the Paleolithic period in northwestern Greece. This started to change with the arrival of the British exploration team led by E. Higgs (Dakaris & Higgs 1964, Higgs et al., 1966 & 1968) under the sponsorship of the British School of Archeology in Athens and backed by the British Academy and the Museum of Archeology and Ethnology of the University of Cambridge. Following Higgs’ methods of surveying and sampling, many open-air Paleolithic sites and chipping floors were discovered and subsequently excavated, including the rock shelters of Asprochaliko on the Louros River and Kastritsa cave in Ioannina. In the following years, A. Sordinas (Sordinas, 1969) carried out research on Corfu and other Ionian Islands and adjacent areas on the Greek mainland with many Paleolithic and later-period discoveries. Apart from sporadic Paleolithic research and further diggings in the previously-discovered shelters of Kleidi and Megalakos, little systematic progress had been made since 1969. The scientific community had to wait until the 1990s for interest in Paleolithic research to be rekindled.

This two-decade gap compelled the author to conduct field research and small-scale surveys on the island of Corfu between 1974-1989 with the aim of locating and putting on record previously unknown Prehistoric sites, as well as salvaging archeological evidence before being lost to the destructive forces of commercial and residential development. These self-funded efforts gradually expanded to the districts of Thesprotia, Ioannina, Preveza, and Arta on the Greek mainland opposite Corfu. Several sites were discovered on Corfu and on the mainland that, together with the findings, were reported to the competent authorities. Among them, Agia was discovered in 1988 and reported in November of the same year to the competent authorities of Corfu and Athens. Due to resource constraints, there was no opportunity to devote an apt amount of time to each and every site discovered, and most were simply recorded with just coordinates and no extensive sampling.

In the 1990s, a small number of these sites were rediscovered by university- and state-backed expeditions, mainly as part of the Thesprotia Project and the later Nikopolis Project. The latter was an interdisciplinary archeological investigation of southern Epirus from Paleolithic to medieval times and has been credited with finding a few Paleolithic sites in relict red beds, including the open-air Paleolithic site of Agia during their field summer seasons from 1991-1994.
This paper does not examine the causes that lead to rediscoveries, nor does it speculate on what could have been achieved had resources been better allocated and the duplication of efforts avoided. This paper discusses the site of Agia to fill research gaps, address inaccuracies, draw further conclusions, and recommend specific further research. This paper is also a plea and an invitation to amateur and independent archeologists who lack backing to continue to report or otherwise announce their efforts and findings and in so doing protect sites, contribute to the advancement of a collective body of knowledge, and support and trigger further research.

**The Agia (Ayia/Aghia) Site**

As part of the survey of the Kokkytos river area, a series of peculiar shelters and recesses were investigated on the perpendicular red rock cliffs on the way from the town of Parga to the village of Agia. Just below and west of the village of Agia, a narrow plateau is formed at a height of about 345m above sea level. The coordinates in the middle of the site are 39°18'39.61"N 20°21'04.91"E, and the barometric altimeter gives a reading of 330 ± 5 m. The site itself measures roughly 400x600 meters.

*Figure 1. The yellow dotted line marks the delimitation of the terra-rossa sediment. A: The present-day village of Agia., B: The vector marks the torrent that drains the remnants of the sediment southwards.*
The site consists of a thick clayey-sandy deposit (*terra rossa*) of Pleistocene origin with a maximum thickness of about 8-12 meters towards the center, which is subject to heavy erosion due to the high annual average rainfall (160-180cm), strong winds, and steepness of the terrain. This deposition rests uncomfortably on light colored Middle Pliocene clays and marls, soft and hard chalk heavily eroded and leached, and conglomerates of various sizes. In the very few parts where erosion has not destroyed the superficial *humus* layer, the deposit is covered by thick native vegetation of semi-mountainous character that is typical on red bed-type soils, comprising among others the species *Quercus coccifera*, *Erica arborea*, *Arbutus unedo*, *Laurus nobilis*, and *Myrtus communis*. The long-distance search for this kind of vegetation, including *Pinus halepensis* (Allepo pine), is a sure indicator that relict red earth lies underneath. A naturally-formed stream that drains the site towards the south during the winter months further contributes to the erosion of the site.

![Figure 2](image.jpg)

*Figure 2*. Partial view of the site, with the photo taken slightly toward the northeast.

Shortly after its initial discovery, the follow-up visit to the site was of equally high value, as heavy rains had created new gullies on the sediment slopes and refreshed the exposed sections, bringing new specimens out of the matrix onto the surface. After
collecting, cleaning, sorting, cataloguing, labeling, and photographing, the findings were dully reported to the Archeological Authorities of Corfu and Athens.

Today, the site has been impacted by human activity that has reduced its value and renders further scientific research onerous. A communal soccer field has been constructed, partially leveling the deposition. A road also cuts through the sediments, and agricultural and livestock storage facilities as well as residential buildings have been built on and near the site. The site is now reduced to a mere 100x70 meters, a fraction of its size from its discovery back in 1988. Human activity continues to accelerate the pace of deterioration, threatening the very survival of the site.

The Lithic Assemblage

Over two hundred flint specimens have been collected from Agia’s eroded surface, gullies, and exposed sections. Care has been taken not to show partiality for finished implements, and a big proportion of knapping by-products were also collected to properly conduct the typological analysis. The method is mainly based on F. Bordes’ (Bordes, 1979) typology, but others were also consulted where appropriate. This paper does not burden the reader with the detailed analysis, but this can be made available to the passionate specialist who wishes to dive deeper into this work and progress it further.

The state of preservation of the flint specimens is excellent in their totality from rolling and chemical standpoints. Compared with assemblages from other sites in the vicinity, similarities in preservation are noticed with places such as the Morfi lower and upper sites as well as Marathia I in Corfu; however, sharp contrasts are found with the Kavounari upper & lower sites and especially with the well-known site of Kokkinopilos on the Louros River. In fact, the chemical action in the latter two sites was substantial, making a good portion of the tools and by-products of knapping brittle.

From the standpoint of wear occurring from utilization, the tools appear to have been abandoned after minimal use and while still in a good state. This is in full contrast with the majority of tools from Corfu¹² (mainly the extended site of Saint Georges south) and many other sites (e.g. northwestern Peloponnesus) where tools have been

¹ Research and assemblages from the Island of Corfu will be covered in a future paper, along with the report of stray Lower Paleolithic finds (including the Xanthátes Acheulean handaxe, discovered and reported to the authorities in 1981).
repeatedly reused and resharpened until totally worn. Such heavy reuse is indicative of a lack of quality raw materials in the vicinity, a problem not faced by the Prehistoric inhabitants of Epirus.

Figure 3. A selection from the assemblage. From left to right: Top row: Five Mousterian points; far right: Ovate or “limace” and a peripherally trimmed flake = convergent double-side scraper and/or knife. Middle row: Three double-sided scrapers on flake and a double-sided scraper on flake-blade exhibiting one convex side and the other side with straight-line retouch; right: bifacial foliated Mousterian points: #3, leaf bifacial uni-pointed, #4, leaf bifacial bi-pointed. Bottom row: Convex side and steep-end “carinated” scraper and six Levalloiso-Mousterian points.
The artifacts are also noted to exhibit no or very little signs of rolling, proving that they have not been leached through horizontal erosional transportation. They are still sharp and in a “usable” condition.

Despite the diligence and constant care to avoid overlooking evidence that may characterize a site, Agia has yielded no cores. This total absence of any type of core was a surprise. A plethora of blanks (half-finished implements), as well as bits and chips, have been observed ranging from 2-10mm.

Scrapers are abundant and still in sharp condition. Various types have been recognized; among these, the simple convex type holds a dominant position in the assemblage, with other types like the convergent and double-sided trailing behind. Some “déjeté” types have also been recognized. Over 60% of the specimens derive from typical Levalloisian flakes with careful and detailed preparation of the striking platform (10 to 15 facets), proving their provenance from typical Levalloisian cores (none found). Among the scrapers, three are of the composite type, also exhibiting a concave retouch, which may suggest the presence of wooden javelins during a hunt (for thrusting rather than throwing). The presence of ovates or “limaces” may have served nearly the same purpose, which is to grind or smooth down wood, bone, and/or antler.

No denticulate, borer, or burin tools were found, nor were other Middle Paleolithic tools of the “Upper Paleolithic type”. The same goes for specimens from later periods, thus safely positioning Agia as a site in use only up to the later Middle Paleolithic times.

The assemblage contains about two dozen points.

First are four typical Levalloisian points that by all probabilities were struck from point tortoise cores and bearing the telltale signs, such as detailed preparation of the striking platform (up to 14 facets) and the typical shape of the platform “en chapeau de gendarme”.

Another six points fall within the types classified as *circum Mediterranean* Levalloiso-Mousterian according to D. Garrod (Garrod, 1937 & 1961), but only as retouched Levallois according to F. Bordes (Bordes, 1979). In this case, the additional minute retouch of the Levalloisian point (sometimes also with an inverse retouch toward the point) and the regularization of the sharp edges by additional retouch characterizes the type. A great similarity is found with the single-level Levalloiso-Mousterian assemblage.
of Hajj Creiem on the Wadi Derna in Cyrenaica (McBurney & Hey, 1955). These specimens may have been retouched more likely on elongated Levalloisian flakes that came from flake blades. This is important because it marks the presence of another technological advancement in Agia: Instead of consuming a whole lump of flint (Levalloisian or tortoise core) for just a single tool, a series of blanks has now been found that could be extracted from one lump of flint (disc or continuation core) and then retouched into different types of tools. In fact, flake-blades were usually struck on disc cores. This technique marks a milestone in raw material savings; albeit in this case, its application was likely driven by speed and efficiency of production rather than lack of materials. Of course, these two types of cores coincided for thousands of years (up to the Early Bronze Age in some places).

Another five points are clearly recognizable as pure, typical Mousterian points with invasive and plano-convex retouch (ablation of the percussion bulb), two of which are cordiform (heart-shaped) with a foliate retouch.

Finally, five bifacial foliates mark the highlight of the site. These points are similar to very rare findings in sites on the island of Corfu and Epirus and even specimens from the Penios River and Theopetra in Thessaly. Thus, finding five such points meters away from one another on a single site like Agia seems extraordinary from the experience in the field so far. Therefore, in conjunction with the plano-convex and bi-convex retouch, the ablation of the bulb, and the invasive foliated retouch, there is little hesitation, albeit with great reserve, in linking these leaf-shaped bifacial foliates with the blättspizen [leaf points] from Mauern Caves 1 & 2 (Zotz, 1955), and Starosel’ye in the Crimea (Formozov, 1952-56). Variants of leaf points also come from the recently discovered site of Uşak-Sürmecik in Western Anatolia, but whether these belong to the Mousterian assemblage or developed locally from a Mousterian of Acheulean tradition remains to be demonstrated. Western Anatolia lays on the path of cultural and technological diffusion from Africa and the Middle East to the Balkans and eventually Europe. These details may show a relationship with the Eastern Mousterian industry and a possible cultural exchange or tradition between groups. That said, there is no attempt to

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2 Due to the continuous perpendicular erosion of the sediment, more recent artifacts from above inevitably tend to mix with older ones below (with the exception of those collected from the cuts). This is a known limitation and drawback of surface collections and is mitigated by careful typological work and meticulous observation of the patina.
attribute a cultural characterization but to indicate a direction for further research on the matter.

Setting the aforementioned leaf bifacials aside, the Mousterian pieces bear similarities with other known open-air sites in the wider area, such as the site of Kokkinopilos, the lesser site of Galatas, and (for comparison purposes only) the Salzgitter-Lebenstedt (Tode et al., 1953), where a radiocarbon date of 48,000 ± 2,000 BP was obtained.

**Conclusion**

The experience gained so far in the field strongly indicates that the more one moves away from the Paleolithic Age coast inland, the more Levalloiso-Mousterian gradually decreases in favor of pure Mousterian technology. This retreat continues toward the Pindus mountain range with an increase in the appearance of earlier or more primitive forms of Mousterian. By this, I do not mean nor suppose the presence of Mousterian of Acheulean tradition, traces of which have not been found. The Pindus posed a formidable barrier for settlers and the diffusion of technology, so tracing the extent of this trend east of the mountain range is not in the scope of this paper.

Agia shares equally the Levalloiso-Mousterian primordial character with the Morfi upper and lower sites (less so in Karvounari 1 & 2) and with Corfu's Levalloiso-Mousterian concentrations on the remains of the terra-rossa sediments. The later work of C. N. Runnels and T. H. Van Andel (Runnels & van Andel, 2003) that focused mostly on the depositional environment of Agia failed to recognize the strong Levalloiso-Mousterian character of its industry, seemingly positioning all their findings under the Mousterian. The predominance of artifacts deriving from Levalloiso-Mousterian industry (almost 70% of the assemblage) overshadow the other Middle Paleolithic findings on this site, which are of the Levalloisian and the Mousterian industries.

The analysis of the findings leads to the following conclusions:

1. The important Middle Paleolithic Morfi upper and lower sites have a predominantly Levalloiso-Mousterian character. According to the model proposed by E. Higgs (Higgs et al., 1966 & 1968), a band of hunter-gatherers using Morfi as their home base ventured within a ~10km radius for hunting and gathering. The lack (so far) of a home base, cave, or shelter in the immediate vicinity of Agia, makes it reasonable
to suppose that Agia was used by the same band or members of the wider group who shared and exploited the same territory.

2. Vast remnants of relict terra-rossa depositions strewn with Levalloiso-Mousterian implements exist on the island of Corfu. Corfu became an island only after the end of the Boreal Stage (~7,600 B.P.) at the beginning of the Atlantic (i.e., during the Mesolithic); before that, it had continuously been subject to marine transgressions and regressions. The aforementioned roaming band(s) of hunter-gatherers may have been responsible for the diffusion of technologies on what is today the island of Corfu and, more precisely, primarily of the Levalloiso-Mousterian. The distance between the Agia site and the closest point on the island of Corfu today being just over 20km is worth noting.

3. The lack of cores combined with the abundance of bits and chips may have importance. As the erosion continues, the discovery of cores in the future can’t be precluded; however the current minimal by-products of secondary knapping and retouch strongly suggest that the initial primary flaking was done elsewhere in another locality unknown to this study and perhaps at a source of readily available raw material. The presence of blanks may also suggest that blank pieces had been brought from such a source (quarry) and subjected to the final secondary retouch on site to meet the needs of the task at hand.

4. The observed lack of charred, fossilized, or petrified bones;34 burned stones; and other remnants indicating hearths suggests that Agia was probably a “kill and butchering” site, after the American fashion of characterization for similar sites in the United States, with the hunting product taken elsewhere for consumption and further processing. However, further research including faunal studies would be required to confirm this characterization.

5. As proposed above, the hunted or gathered product was not consumed onsite at Agia but probably taken elsewhere. This word is not an easy way to deflect the question of the home base location. As far as the short summer conditions permit, even in the harsh conditions of Würm I, II & III, the Paleolithic band(s) could have

3 Charred and petrified fragments of ribs were observed in 1978 in a gully in the Middle Paleolithic site of Stroya on Corfu, later identified as belonging to the genus Sus (whether they come from Sus stroazzi or Sus scrofa remains unclear).
coped out in the open, but the severe winter conditions make the question of their permanent home base pertinent and compel one to provide an answer. Morfi is just one of the candidates in the vicinity of Agia. Beginning with the earliest Cambridge expedition directed by E. Higgs in 1962 and re-investigations in 1979 by the second Cambridge University team directed by G. Bailey, followed by the Thesprotia Project of the Finnish School at Athens 2004-8 directed by B. Forsén, and finishing with the Nikopolis Project, all seem to have failed to recognize the archeological potential of the Saint Arsenius cave (Agios Arsenios, 39° 18’ 3.8” N 20° 29’ 50.2” E, at ~340m) and its projecting shelter located on the presumed edge of the Paleolithic site of Morfi on the slope of Erimitis Hill (518m), which faces north and has a long, wide talus. The same goes for another similar geological feature known as the Abyss of the Styx (Varathro tis Stygos, 39° 17’ 46” N 20° 30’ 54” E, at ~190m), situated on the eastern slope of the same hill about 1.5km away from Saint Arsenius near the hamlet of Tzara on the way from Morfi to Kanalaki. This feature was a large, two-chambered cave with a westward-facing opening. The roof of the main chamber has collapsed over the eons and appears today as a depression, leaving intact the adjacent lower chamber of 30m in length, 20m in width, and 20m in height. The east side of this antechamber has a small pond formed from waters percolating from the ceiling. Colluviums consisting of rocky debris and red earth have covered the passage to the collapsed main chamber and much of the floor. These two caves on the slopes of Erimitis Hill are hard to miss, so their total absence from the literature is indeed surprising. One can only speculate as to the reasons for this hopefully accidental omission; however, unfamiliarity with the terrain, lack of resources, conflicting priorities, negligence, St. Arsenius cave functioning as a Christian Chapel, and safety concerns in the Abyss cave could have been some of these reasons. There is little doubt, however, that these caves warrant extensive future research and may prove to be of the outmost importance to the Paleolithic past of northwestern Greece, importance equal to or greater than that of Asprochaliko cave on the Louros River, with implications to the archeology of the nearby islands.

During the classification work and while following F. Bordes’ (Bordes, 1979) typology of the French Paleolithic, the challenges previously encountered while working on assemblages from Corfu resurfaced. Artifacts that do not fit neatly in a defined type need to
be considered atypical or be reluctantly classed as the nearest type. However, when specimens of advanced conception, excellent craftsmanship, exquisite aesthetic value, and with fully evolved specialized features to fit particular needs consistently and repeatedly emerge, then due consideration must be given. This is meant as a call and an invitation to specialists to study the artifacts and to define, if appropriate, a new typology or type(s), at least for the Middle Paleolithic, that would be more applicable to Greece and the wider Balkan Peninsula and more representative of the area’s rich prehistory.

The discovery and significance of the Middle Paleolithic site of Agia has put the planned investigation of the aforementioned shelters and recesses between Parga and Agia on hold, but future investigation must be scheduled. Their current use as sheep and goat pens may trace back to the long tradition of reuse, adaptation, and habitation of preexisting structures, further supporting the need for investigation. These features may be connected to the nearby Paleolithic sites and be pieces of the broader puzzle.

Based on the current findings it can be said with a high degree of confidence that Agia is a site and an industry of advanced Middle Paleolithic in age and in technology and of Mousterian and, predominantly, Levalloiso-Mousterian types of Levalloisian tradition with elements of Eastern Mousterian affinities.  

References


4 Outside Epirus, Mousterian industries containing variants of leaf–shaped points have occurred in Turkiye, Bulgaria, and Rumania, as well as further north in Hungary and Czechia and Slovakia. However, no obvious connection has been found with the Szelettian leaf points, as they tend to merge into the Upper Paleolithic at ~31,000 BP.

5 Readers may wonder about the limited or poor amount of literature presented in this bibliography, but this paper is the product of an original research on the field and not a study based on the work and research of third parties, therefore only documents occasionally consulted are displayed.


RESUME EN FRANÇAIS

Plusieurs sites d’Age Paléolithique existent dans la Grèce Nord-Occidentale à coté de celles dans les Iles Ioniennes, une quantité qui va sans aucun doute augmenter. Elles appartiennent toutes au Paléolithique Moyen et Supérieur avec peux d’indications pour des phases plus vieilles.

Dans l’île de Corfoù, un endroit limité par rapport à l’Epire, une abondance de sites Paléolithiques a été enregistrée. Une brèche de quarante-neuf kilomètres vide de restes Paléolithiques reste le problème principal de la connexion culturelle et technologique entre les deux régions. Cette brèche vient alors se remplir en partie par la découverte du site d’Agia dans le District de Préveza sur la Grèce Nord Occidentale.