

# U4V Case Studies

## Paros Quarries: Glory, Neglect and Hope

By Haris Martinos and Konstantina Alipranti

The Greek island of Paros belongs to the Cyclades island group in the Aegean Sea, has an area of just under 200 km<sup>2</sup> and a permanent population of around 15,000. Historically, Paros was known for its fine white marble and, today, abandoned marble quarries can be found in abundance but the island is primarily known as a popular tourist spot.

The main groups of ancient quarries are located in the centre of the island, near the village of Marathi. They were in operation from the Early Cycladic period (3,200 BC) until the 19th century. They include a number of magnificent underground galleries created from the extraction of marble. All set within an enchanting natural environment. Best known are two underground quarries, near the village of Marathi, the Quarry of the Nymphs and the Quarry of Pan, the source of the extremely pure and highly translucent *lychnites* marble. Nearby, in a location called Lakkoi, there are at least 20 opencast quarries of different shapes and sizes. They were the source of coarser grained marble than *lychnites* and mainly used in architectural works, and are older than those of Nymphs and Pan, already in use in the 7<sup>th</sup> Century BC. The Parian marble became the dominant medium in monumental art from the 6<sup>th</sup> century BC and maintained its dominant position through the classical period and afterwards up to the 3<sup>rd</sup> century AD. Hermes of Praxiteles, Venus de Milo, Augustus of Prima Porta are just a few of the famous works of art adorning major museums in Europe.

Parian marble was exported not only in rough blocks but also in the form of art works, such as statues, columns, funerary monuments, stelai or sarcophagi. Marble artists' workshops flourished in Paros. Exports of fine works and semi-finished works of art were often accompanied by Parian sculptors. Works produced in Parian marble have been located in an extensive area from the Black Sea to Spain. This huge industrial and commercial activity brought economic prosperity as well as splendour to Paros in ancient times. The capital city of the city-state of Paros was known as the "brilliant city" of Paros, due to its embellishment with works made of Parian marble. It was a substantial city of 40,000 inhabitants including a large number of slaves working under harsh conditions in the quarries. The ancient quarries were revived in the 19<sup>th</sup> century with a succession of foreign companies extracting the remaining deposits of *lychnites*. The disused quarries were forgotten in the first half of the 20<sup>th</sup> century, and it was only from the 1960s onwards that local people and the growing numbers of tourists started paying attention to these, by then, hidden treasures. The quarries were designated a protected 'archaeological area' in 1974 and was extended in



2000 to include the quarries at Lakkoi. It covers some 35 ha, owned in its entirety by a number of private owners. In 2018, the part that contains some substantial but largely derelict industrial buildings from the 19<sup>th</sup> century operation of the quarries, was additionally designated as a 'historic site' by ministerial decision. The Ministry of Culture – its central services in Athens and the Cyclades Ephorate of Antiquities – is statutorily responsible for the archaeological area. A major landmark in this process of re-discovery was an international archaeological conference entitled *Paria Lithos*, held on Paros in 1997. It brought together a large body of relevant research and documented the recognition of the unique importance of the ancient quarries. The conference resolution included that: "The Marathi-Lakkoi area is a complex union of man and nature. Efforts must be initiated to convert the



Marathi Marble Quarries

zone into an archaeological-cultural park, which will include quarries, landscape, and buildings, the last representing an



Quarry of Nymphs



Quarry of Nymphs : Gallery



Quarry of Pan – Marble stele

important complex of 19<sup>th</sup> century industrial architecture. After restoration, the buildings should be used for cultural and scientific purposes”

Alas, nothing happened in the following 20 years and the current state of the quarries is deplorable. The ancient galleries are neglected and inaccessible - a source of constant disappointment for thousands of visitors to Paros. To add insult to injury, a modern quarry operates nearby, using explosives for extracting building aggregates that cause serious vibrations, putting at risk the stability of the ancient underground galleries. In 2017, the local cultural association ‘Archilochos’ made strong representations to the Ministry of Culture highlighting that *“it is possible that some of the galleries will collapse and an important monument of world interest will be lost”* and this reverberated in the national media. Seeing the issues of protection and neglect persisting for so long, the association ‘Friends of Paros’ sought to mobilise the local stakeholders in an initiative for the rescue, protection and promotion of the monument of the ancient underground quarries and the broader archaeological area. A workshop took place on 16 November 2019, bringing together local associations, the Municipality of Paros, representatives of the Ministry of Culture and high-level guest speakers. It laid the foundations for all relevant parties to work in partnership towards the protection and valorisation of the ancient quarries. The workshop concluded with an initial package of specific actions to help establish a locally-led participatory process and create the preconditions for a long-term solution, including:

- an independent and trustworthy report on the condition and preservation of the galleries and the establishment of a monitoring system. The expropriation and / or progressive acquisition of the entire archaeological site;
- digital mapping out of the galleries and samples of digital applications;
- geological survey to systematically locate all galleries in the archaeological site;
- collection and documentation and photographic data and other archives, copies of sculptures, etc. for the progressive promotion of the site;
- participation in national and international programmes and events aiming at the greater recognition of the value of the site.

The Municipality of Paros set up a Coordinating Committee, with membership drawn from the main stakeholders, to steer the implementation of these actions. Some of the actions have already progressed but others have been more difficult to advance, in part due to the Covid-19 disruption and financial constraints. After a year of collective efforts, it is now the time to draw lessons and take the next steps, towards a shared vision for the creation of an archaeological park that will showcase the monument of the ancient galleries, the incomparable story of Paros marble and its extraction, and its wider cultural value around the world. It is hoped that the inclusion of Paros in the U4V Action, as a case study, will offer opportunities for interaction with other areas and the experts of the Action, that will contribute to this end.

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## Aya Napa Monastery: a religious treasure hidden in Cyprus

By Mia Gaia Trentin

The village of Aya Napa is located on the south-east coast of Cyprus, between cape Pila and Cavo Greco. The area is characterized by high cliff waning towards the sea with suggestive sandy beaches, in a typical Mediterranean landscape. Aya Napa was a small village based on fishing and profitable agricultural activities thanks to the fertile and characteristic red soil, rich in iron, which gave the name of 'Kokkinochoria' (red soil villages) to the area. The economy and urban structure of Aya Napa crucially changed after the Turkish invasion of 1974. Famagusta, the principal touristic city of the Eastern Mediterranean, was occupied, and thousands of refugees moved into the south, settled down in Protaras and Aya Napa. Gradually, towards the end of the 70s, all the touristic activities previously hosted in Famagusta were recreated mainly in Aya Napa, thanks to its long and attractive coastline. Following the touristic trends of the 80s, Aya Napa tourism focused on a resort model, benefitting of an enchanting natural landscape. Leisure activities and facilities have been integrated towards the years to fulfil the traditional concept of holidays based on relax and amusement.

This model was economically successful, and in 2017 the city touristic industry had 175 hosting facilities with a 27,000 person-bed capacity and hosted around 700,000 tourists. The tourist capacity is particularly surprising considering that the resident of Aya Napa, as for the 2011 census, is of 3.212 units. The data mentioned above were the basis of the 'Cyprus Tourism Strategy drawn up by the Government of Cyprus in 2017. The report analytically describes for each area of the island the 2017 touristic situation, establishing the guidelines to be implemented until 2030. In the document the suggestion to develop the 'product vocation' of Aya Napa is described as follows: *Aya Napa should aspire to be regarded as one of Europe's top 3 beaches and nightclubbing holiday destinations, with a customer value proposition (CVP), offering the best beach and marine experience in Cyprus for Young Adults, complemented by international standard beach clubs and nightlife.*

At the moment, the impact of the COVID pandemic on Cyprus is estimated with a loss of 98% of the incoming tourism. Aya Napa is one of the areas that suffered more, with an estimated reduction of 90% of revenue. Unlike other regions of the island, Aya Napa has oriented its offer to a foreign public, and this year has not been able to attract locals. In other areas, such as Paphos, a differentiated offer based on landscape and



cultural assets ensured a reduced but constant flow.

What the report and the tourist offer do not mention and apparently not even consider is the rich Cultural Heritage of the area, mainly constitutes by underground sites. Ayia Napa region is characterized by limestone bedrock, rich in underground water resources. Thanks to its geological conformation - characterized by numerous natural caves - and its proximity to the coast, the area was inhabited since the Neolithic period. Natural and anthropic spaces have shaped the landscape and its long-lasting history, with the Medieval monastery of Ayia Napa representing the prominent example.

The original cult site, formed in a natural rock cave with a spring source, was integrated into a church structure around the 12<sup>th</sup> century. The present form includes the monastic complex which developed around the shrine between the Lusignan and Venetian periods. The monastery that constituted the core of the village is now unrecognizable, lost within a multitude of bars and nightclubs.

The challenge that Ayia Napa presents is precisely this: to recover its underground heritage. Its regeneration and valorisation will promote sustainable and resilient socio-economic development at the service of the community and to a broader public.



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# U4V Case Studies

## Antelas and Carapito, a new beginning of the Megalithic route

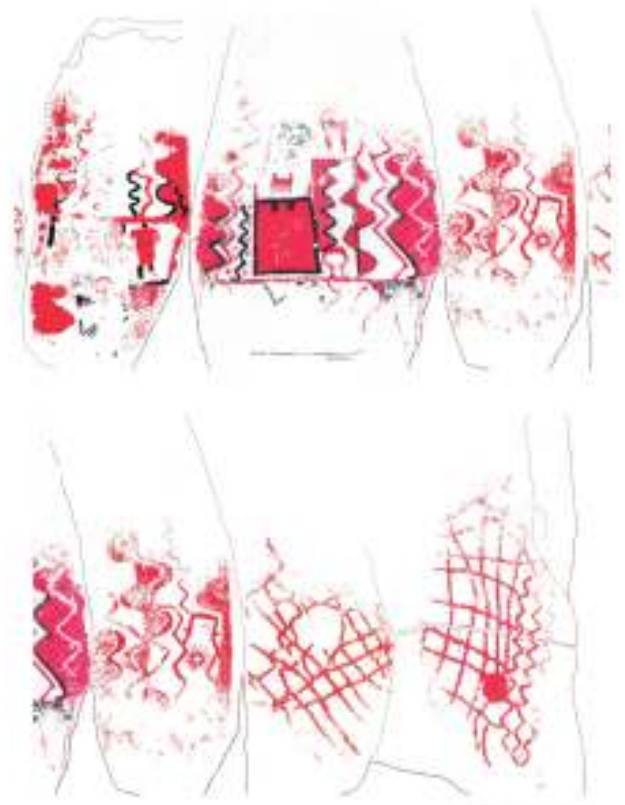
By Alice Tavares Costa

On the western fringes of Europe, right in the central of Portugal, sit two of the most impressive megalithic tombs of the continent: Antelas passage grave, in the municipality of Oliveira de Frades and Carapito dolmen, in the municipality of Aguiar da Beira. These monuments reveal particular features that allow them to be regarded as ambassadors, or representatives, of this cultural phenomenon that spanned across Europe between the 5th to the 3rd millennium BC.

The burial chamber at Antelas gathers the most well preserved assemblage of painted Megalithic Art in the world. The repertoire of red and black paintings on a white background combines abstract motifs such as upright rows of triangles and wavy lines with figurative images like human figures, idols and the representation of a solar figure. Antelas may perhaps be regarded as a Neolithic cathedral, from which emanates a range of emotions and transcendental mystique usually associated with these monuments. The painted slabs were first uncovered in 1956 as a result of the archaeological excavation carried out by L. Albuquerque e Castro, O. da Veiga Ferreira e A. Viana who, were aware of the importance of the findings and their own incapacity to assure its safekeeping, backfilled the burial chamber as a means of preserving this unique assemblage. The paintings would only come to see the light of day again forty years later, when new archaeological excavations were carried out aiming to make the monument accessible to the general public. The archaeological works extended from the chamber and passage to the forecourt and included a component of architectural consolidation and restoration. This project took place between 1993 and 1995 and was promoted by the Portuguese Institute of Archaeological and Architectural Heritage (IPPAAR), Council of Oliveira de Frades



and the Institute of Archaeology of the Faculty of Letters of University of Coimbra. Twenty years on, an assessment of the restoration solutions showed that they did not work out in the long-term as expected. For this reason, the local council is currently developing a number of rescue actions intended to sort out urgent issues concerning the preservation of the paintings while a wider-scale recovering project is conceived. Amongst the actions that took place recently was the first



Dólmen de Antelas. Reproduction of some slabs of the chamber . (André Santos, Domingos Cruz and Fernando Barbosa, 2017).



Dólmen of Antelas. Inside the chamber



ropean Megalithic Art. In the 1990s, this monument was the object of restoration works that unfortunately remained incomplete, contributing to enhance its state of ruin. At present, the municipality of Aguiar da Beira is promoting an audacious development project that includes the reconstruction of the tomb's monumental mound. It is worth highlighting the outstanding connection between the villagers of the nearby hamlet, Carapito, with the monument. Since, at least, the time of Vera Leisner and Leonel Ribeiro's excavations, they nourish great expectations for the improvement of its state of conservation. The commitment of the people in safeguarding this monument, that they assume as their own, has motivated stories that demonstrate this sense of belonging: when it was announced, after excavations ended, the intention to take one of the engraved slabs known as "altar stone" to the National Museum of Archaeology, the population took action to stop it being moved away to Lisbon, having been kept since guarded by the local priest at his residence from where it was only recently removed to be submitted to a three-dimensional survey in the scope of the current rehabilitation works.



*Dólmen 1 do Carapito. Reproduction of slab C1. (Elisabeth Shee Towhig, 1981).*

comprehensive programme of pigment analysis and study of the biological colonisation on the painted granite slabs, which results will contribute for the definition of future clear-cut conservation measures. This research was carried out by a group of specialists in the study and conservation of Prehistoric rock art - Analytical works were carried out in the Departamento de Ingeniería de los Recursos Naturales y Medio Ambiente of the University of Vigo (Spain). The hamlet nearest to the tomb shares its place name, Antelas, and its inhabitants still nurture profound feelings for the monu-

ment as many guided visitors to the mound over the decades and some actually participated as workers in the 1950s' excavations. Further inland, Carapito is a monumental chambered tomb which slabs rise up to 5m in height. The study of this dolmen was first carried out by Vera Leisner and Leonel Ribeiro in 1966 and is seen as an highlight in the history of Portuguese Archaeology for it was the first megalithic tomb to be the object of radiocarbon dating. In fact, at the time that relative chronologies started to be assessed in Iberian Archaeology, the results obtained for the layer of charcoal sitting at the foundations of the burial chamber showed that its construction and primary use dated back to the late 5th millennium BC, corresponding to the earlier phase of megalithic tomb building in the region of Beira Alta. One other aspect that makes this monument particularly impressive is the presence of intricate compositions of carved sun-like motifs on the chamber's orthostates, making them one of the most beautiful examples of Eu-

This assignment alongside a future project that shall be carried out within the scope of an application for EU co-funding submitted to Portugal 2020 through the 2020 Centre, are intended to foster this relationship between the people and the monument. Future partnerships will make use of the strong pedagogical asset provided by the reconstruction of the mound as well as the inclusion of the monument both in the Small Route of Carapito Megaliths and the MEG - Megalithic Route of the Dão-Lafões Region. The establishment of partnerships will target the county's schools as well as local associations particularly those devoted to the preservation of Cultural Heritage, Prehistory and Megaliths, such as AQUILARIS - Living Heritage Aguiar da Beira. In addition, the establishment of protocols with two rural tourism units at Carapito will promote the cooperation between public and private entities, guaranteeing the availability of accommodation for Cultural Heritage activities and, consequently enhancing their own offer. The great dolmen of Carapito 1 will be the focal point of the above mentioned Small Megalithic Route that includes the remaining three monuments known in the area, constituting a pedestrian route designed to celebrate its magnificent landscapes and cultural environments. Finally, it should be noted that both Antelas and Carapito are to be included in a future regional megalithic route along with other 23 monuments scattered across 15 counties, which contract between the entities responsible for its implementation has already been signed.

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## Camerano: the Underground City

*By Ernesto Marcheggiani , Ilaria Fioretti , Andrea Galli, Francesco Paci, Eva Malinverni, Roberto Pierdicca, Francesco Chiapparino, and Luca Andreoni*

Camerano is a local heritage in central Italy and a landmark for its network of connected built underground spaces. This underground built heritage represents economic leverage for cultural tourism and an occasion to preserve local identity. The self-initiative of the local community, and the determination and far-sightedness of the local authority, allowed to differentiate the local tourism offer leading to success in terms of tourism attractiveness, with more than 25'000 visitors per year.

With the occasion of the COST action CA18110, involving a research unit of the Marche Polytechnic University, a collaborative network is being set up, involving actors from the whole territory. Special attention is being given to the digital dimension of cultural heritage, an asset for the next decade. Nonetheless, the idea of a cyberization of the thematic tours of Camerano's Cave sounds attractive if considering, especially, that direct access to the cavities is not always possible given the intrinsic vulnerability of caves.

Although the first reliable record dates 1327 AC, shreds of evidence suggest that the original complex can be traced back to the 11th-3rd century BC. Along the centuries the cavities expanded, creating a network of connected built spaces, under a strict family-owned real estate regime. In the second half of last century, the owners began to leave the caves in a state of disarray, its only thanks to determination and far-sightedness of the local authority that a recovering work started in the late 90s.

The presence of the caves can be connected to the historical events of settlement in the slopes of Mount Conero. Among the possible hypotheses on the origin and meaning of the toponym "Camerano" itself, it is possible to detect a link with the idea of a closed place, connected with the presence of the caves. It is difficult to suggest a specific date of origin. As they appear, they date back to the remodelling of the eighteenth and nineteenth centuries, but a shred of certain evidence goes back to the medieval period (1327). This relates to the presence of the caves of the nearby city of Osimo (1276). Although the urban dimension of the Picena civilization was minimal, this hypothesis appears stimulating, because it finds an indirect confirmation in the case of Numana, where there are testimonies of two pits from the Picentes' era, attributable to probable purposes of worship. Despite recursive uses in different historical periods poorly documented, and the simultaneous presence of multiple uses, among others, at least four uses should be mentioned: a place of worship, water supply, bomb shelters such as during the WWII, storage and



conservation of agricultural goods, probably belonging to the owners of the above buildings.

The transformations in the territorial setting of Camerano with its caves testify the stratification of economic, social and cultural models over the centuries. The peculiar urban and rural landscapes and new economic and social behaviours of the local community resulted from these transformations. However, the current situation is characterized by a strong



identity link between the local community and the history of caves, a considerable uncertainty for the future concerns local communities, considering the recent economic downturn and cultural turmoil for the further development, especially the post-pandemic scenario.

The aim was valorising the caves as potential economic leverage for cultural tourism, and an occasion to preserve local identity.

Although the Marche region can boast a rich heritage of underground spaces, including Camerano, the development of thematic networks capable of attracting tourist flows is not yet complete. If the reconnection will be implemented would become a landmark reaching out to new tourism segments.

From a first analysis based on the historical functions five potential thematic networks could be defined:

- water supply function: aqueducts' tunnel, wells, cisterns, emissaries
- military-strategic function: tunnels used to defend against sieges, secret passages to exit the walls of fortified centres
- food storage function: storage in underground cavities of food and wine that has always been a rural tradition
- cultural or religious function: caves that housed hermitages or small religious structures intended for the hospitality of pilgrims and wayfarers
- mines or quarries: hypogea used in the past as mines or quarries of stone, or other minerals

Special attention is given to the digital dimension of Cultural Heritage. An asset for the next decade, in particular after the COVID-19 pandemic. Besides, the recent evolution of critical European territorial policies created an excellent pre-conditions for framing this landscape local planning operation at the very local scale. Finally, the ongoing Cost action CA18110 "Underground Built Heritage as a catalyzer for Community Valorisation" represents an opportunity to steer such an idea of a landscape's approach. One of the characteristics of this project, in which the local community of Camerano and the LRC/CIRP of the Università Politecnica delle Marche are involved, is its possible implementation in terms of heritage management and exploitation.

Two main issues still remain: a) a lack of experts with a broad vision of the different possibilities for enhancing the territory/landscape; b) the need to reconnect the places overcoming the marginalization from which it suffers today. The first issue is being investigated as part of a Cost action CA18110 "Underground Built Heritage as a catalyzer for Community Valorisation" aiming at promoting balanced and sustainable approaches for the conservation of the underground heritage, unlocking its potential for regeneration policies. During the action, a network of junior experts will be trained along with three strands: 1. underground conservation and monitoring; 2. Heritage-Led urban and rural regeneration; 3. Planning and governance tools. A tailored methodology of "living

Lab" (Pace, et Al. 2019 <http://underground4value.eu/living-labs/>) is being implemented during Underground4value.

