

New Unknown Archaeological Data in Azores: The Hipogea of the Brazil Mount, Terceira Island (Portugal) and its Parallels with the Cultures of the Mediterranean

Nuno Ribeiro <sup>1 & 2</sup>, Anabela Joaquineto <sup>1 & 2</sup>, António S. Pereira <sup>1 & 3</sup>

1 – Archaeologists, *Associação Portuguesa de Investigação Arqueológica* (APIA)

[nuno.ribeiro@apia.pt](mailto:nuno.ribeiro@apia.pt) , [anabela.joaquineto@apia.pt](mailto:anabela.joaquineto@apia.pt) , [sergio.pereira@apia.pt](mailto:sergio.pereira@apia.pt)

2 – Phd students, Dept. Prehistory and Ancient History, University of Salamanca.

3 – Phd student, University of Tras-os-Montes and Alto Douro(UTAD)

APIA – Rua Maximina n.º13 – 2300 –251 - Serra Tomar, Portugal

#### Abstract

The presentation intends to give to know the recent discoveries of found hypogeal structures in the Island of Third (Açores), Mount Brazil. The monuments in question are placed in an area next to where in August of 2010 it was discovered the 1º hypogeum.

These new monuments present trapezoidal plants, with circular entrances, one of them present four small circular sockets in its interior, being on for channels, another one present a tank probably ceremonial, which if accedes through stairs.

The existence of murex in the region and the fact of this island to make use of the best natural ports of the Atlantic islands and if to point out enters the North of Africa and the Europe, had apparently made of this area an obligator point of stopping between the Canaries, the colonies of Lixus and Mogador and the Europe.

Keywords: Hypogeum, Atlantic navigations, Carthaginians, Azores, Portugal.

In Classical times and in the Middle Age, legends circulating Europe were revealing fantastic worlds, mythic lands and journeys (the legendary Atlantis, the Voyage of Saint Brendan or the Legend of the Fortunate Islands) - the remains of a collective memory that was later lost.

These journeys were in fact possible in antiquity, in times when techniques, trade and the desire to colonize new lands were motivating the Mediterranean commercial force. These long trips were possible with some knowledge of the marine currents and basic astronomical navigation known for a long time in the Mediterranean.

Classical sources often refer to the use of the stars in navigation. Before the introduction of the magnetic compass, which occurred in the Mediterranean in the 12<sup>th</sup> century, it enabled men to navigate the open sea. The oldest allusion to celestial navigation seems to be Homer's epic poem the *Odyssey* (written around 1000 BC) with a reference to various sky elements used by Odysseus for sailing: the Pleiades, Arcturus and the Great Bear (Ursa Major).

<sup>1</sup>Roughly, the utilization of the constellation Ursa Major was attributed to the Greeks, while Ursa Minor was allegedly preferred by Phoenician sailors.<sup>2</sup> For mid-northern latitudes, stars and constellations near the North celestial pole are visible all night, and were an indication not only of direction but also position. In a time when, for measuring angles, no precision instruments were available, the altitude of a star was possibly taken with the help of the hand, an arrow, a spear or the top of the mast.<sup>3</sup>

Here are the results of several visits to the Azores archipelago undertaken since August 2010. We visited the islands of Corvo (West Group), Terceira (Central Group) and Santa Maria (East Group). On these islands we were able to identify various types of structures excavated in the rock (figure 1). They have not yet been dated and some are related to agriculture. Some are recognised according to their latest known use. The function of some remains unknown, even to the local population. We shall also present an unpublished inscription, engraved on what is possibly the base of a statue now in a house in Posto Santo, near the city of Angra on Terceira Island. It was possible to establish the origin of the material composing the base for the inscription: about 4 Km away from where it is now.

The studied archaeological remains indicate a pre-Portuguese origin, with parallels to similar structures found within the great Mediterranean cultures since the Late Bronze Age. Apparently the majority of these structures did not produce material remains on the superficial level.

Since the discovery of the first monuments, the Associação Portuguesa de Investigação Arqueológica (APIA) informed the various institutions in charge of the Portuguese Archaeological Heritage of their existence. In March 2011, the APIA presented a research proposal that was turned down this June by the Regional Government of the Azores due to lack of funds. A first report on these finds was presented in March at the SOMA 2011 congress (15th Symposium on Mediterranean Archaeology, Catania University – Sicily).

---

<sup>1</sup>Derek Howse, "Navigation and Astronomy - I: The first three thousand years", *Journal of the British Astronomical Association*, vol.92, no.2 (1982), 53-60.

<sup>2</sup>A. Le Boeuffe, *Le Ciel des Romains* (Paris: De Boccard, 1989), p. 26.

<sup>3</sup>Peter Ifland, *Taking the Stars – Celestial Navigation from Argonauts to Astronauts* (Malabar: The Mariners' Museum/Krieger Publishing Company, 1998), XIV, XV.

It was therefore impossible to take the investigation forwards. We only managed to gather data produced on a weekly basis by the various researchers involved in the project, the historian Joaquim Fernandes raising the first questions. Researchers Antonieta Costa and Félix Rodrigues were based on Terceira Island, and the architect Ricardo Freitas on Santa Maria Island. Subsequently, researchers Prof. Antonio Rodriguez Colmenero and Prof. Herbert Sauren accepted the task of translating the discovered inscription and helping to understand a mosaic of data, at times surprising. An important number of archaeological sites of different eras were inventoried, in the hope of improving our understanding of the human colonization in this region.

Of the various kinds of similar monuments present on the different islands, most prominent are the Hypogeum-like ones, especially from Terceira Island, on a military restricted area, and actually classified as being of World Heritage status by UNESCO. This area, called Mount Brazil, bears several nuclei, the most important one being at the Fort of São Diogo. More structures are present in this open-air area, on one of the highest peaks of the Mount Brazil, “one called the Pico do Facho”, located near historical structures. The ancient remains are characterized by the presence of dozens of postholes of various dimensions, small canals, basins, possible chairs excavated from the outcrop and by at least one reservoir (figure 2 and 3). They might form a proto-historic sanctuary. This assemblage was discovered by the prehistorian Manuel Calado during a visit organized by APIA in December 2010.

Several more hypogeal structures were found on Mount Brazil. In August 2010 a first hypogeum was discovered, and six more were found during the following months, located in the Mount Zimbreiro (figure 4). All six structures have the same western geographical orientation, with their opening directly facing west towards Fanal Bay. The second hypogeum is rather damaged, and has a small altar or bench and a possible niche excavated in the tuff. It is situated on the upper part of a hillside, over the São Diogo Fort area, where we find the other monuments whose descriptions follow below.

The third nucleus of hypogea excavated in the rock is at Fort São Diogo near the sea and by an old road that led to the port in the XVth and XVIth centuries. This structure is composed of two chambers, or two adjacent hypogea. One presents a bigger chamber bearing marks of a closing device excavated in the rock and some characteristics revealing a space probably related to some kind of cult (figure 5).

In the most interior wall of the chamber is a small basin that measures about 27cm by 55cm, associated with two canals sculpted in the wall on both sides of it (figure 6). Its purpose seems rather

more symbolical than practical, as it collects humidity running down the walls. Inside the monument and on the surface, a small marine mollusc shell was discovered. It is still being studied. It belongs to the “murex” family, used in antiquity in the dye industry to produce Tyrian purple. Both structures show signs of recent re-use, like numbers and letters inscriptions.

Following the path that leads to the described structures, we reach what we consider to be the main group, most probably a place of worship. They will be designated hypogea 4, 5 and 6 (figure 7). They face the sea, at a distance of about thirty meters. Like the previous structures, they stand near a road, but at a level that would have made them safe from a sea assault.

The entrance to these structures is circular and more than 2.20meters high. Structures 4 and 5 have approximately the same plan, almost forming a triangle, with sides measuring between 5,5 and 6 meters, with the point converging towards the entrance in both monuments(figure 8).

Structure 4 is slightly inclined from the inside towards the outside. In the innermost part, a set of four almost circular sculpted cavities was identified, measuring between 50 to 70cm in diameter and less than 40cm deep (figure 9).

They are linked to a channel excavated in the rock and that runs along the bottom of the wall through canals about 10cm thick and 25-45cm long. The channel along the bottom of the wall at floor level runs toward the monument’s entrance (figure 10).

Structure number 5 is of a similar plan, and presents a set of elements once again associated with water. We can gain access to it via an almost circular entrance of about 2,40meters. One of the walls, about 65cm high, seems to have been made in modern times as it bears traces of lime. Inside we can find an excavated reservoir, almost triangular in shape. A small staircase leads to it. The bottom of this structure reveals a platform resembling a bench, running along the whole structure, and possibly used for ablutions (Figure 11).

On a higher level of the surface and near the walls inside the monument, there is a channel excavated in the rock that runs along the whole of the interior structure. This bears traces of lime, indicating re-use. In a corner of this structure, about 1,70m high, we noted an anthropomorphic niche, with an 80cm base and a 50cm upper part (Figure 12). Its variable depth is more inclined in the upper part, resulting in a different field of vision from the centre of the entrance towards the exterior of the monument, in the direction of a mount near Posto Santo. We shall stress that the entrances to these monuments are facing the islands of Pico and São Jorge, visible only in good weather.

Finally hypogeum nº6, near hypogeum nº5, is characterized by the fact that it is located on a higher level than the previously described monuments, at least 3 meters above ground. Access can be gained to it via a circular entrance about 1,82m high, like the previous ones. Its plan is less complex and smaller (only 2,93 by 2,84m), and of a uterine shape. The existence of this monument near the two other structures and at a level accessible only with a staircase raises the possibility that it was used for leaving offerings. This hypothesis can only be verified with an archaeological excavation.

The architectonic characteristics of these structures, their location on a natural peninsula bordered with two ports, one on each side, demonstrate cult-related functions, and show parallels with the proto-historic town of Malaka, (present-day Malaga).

Lucian of Samosata is a Syrian/Greek writer (II<sup>nd</sup> century A.D.) often referred to in proto-history studies, especially for the Middle East, as he extensively travelled there. He explains in the text cited below (translated in Portuguese<sup>4</sup> or in English<sup>5</sup>):

The Phoenician sanctuaries were also called “high places”, their localization not necessarily being at the top of the mount, but on the slope, on the western side for a better climatic exposition. A river, stream, spring or cistern was always part of the structure, as, according to the Phoenicians and the Hebrews, “God would only manifest himself near water”<sup>6</sup>.

In the history of Mediterranean architecture, the use of the trapezium / isosceles triangle and variations of these is associated with temples in Egypt and Carthage for example. These representations are frequent in Phoenician culture<sup>7</sup>, and are related to the figure of Astarte/Tanit.

The Phoenician goddess Astarte was brought to Carthage (which means “the new Phoenicia”) under the name of Tanit. Her cult was implanted along the Phoenician – Carthaginian route, in the newly created city-states of Cadiz (Gades) and Malaka in Hispania for example. The most common symbol of

---

<sup>4</sup> Moisés Espírito Santo, from the french translation by Mário Meunier and the english one by A. M. Harmon.

<sup>5</sup> *The Syrian Goddess*, Herbert A. Strong and John Garstang [1913]

<sup>6</sup> *A Deusa Síria*, de Luciano, in E. Santo, Moisés, *Origens do Cristianismo Português*, Lisboa, 2000 p.38

<sup>7</sup> This hypothesis is explained by the presence of other evidences of the same origin, and because these people were great sailors

Tanit, the trapezium, is often found in ancient inscriptions and sculptures of the goddess, and is often used in higher mathematics and calculus. This is the shape of the two hypogea under study, constructed on a trapezoidal plan. Hypogea n°4 and n°5 are a trapezium with no parallel sides. As for the circular entrances in hypogeum n°4, could they represent a head?

Easy access to water was not the only requirement. Many authors also mention the importance of the relation between the divinity and the earth, as the sanctuaries were excavated in the rock and made in the shape of a uterus (Queen of Heaven” in the Book of Jeremiah (7.17-18 and 44.15-19). As a protector or patron of the mariners, as well as of the city of Carthage, Tanit was associated with defence and war. This explains why many of her sanctuaries are located near the sea.

The artificial caves or hypogea (identified with an arrow) are situated on the western slope of the Zimbreiro Peak and just above the sea, at the border between the woody part of the slope and the severely eroded area.

Our interpretation, at the moment is based on the architecture of the existing monuments only, and awaiting archaeological excavations, needs confirmation.

However, a medieval or modern origin of the remains is ruled out, we compared them with what we know about XVth and XVIth century Portuguese and Spanish architecture - the time when the island was supposedly first colonised. We shall also stress that these monuments were already marked on XIXth century maps, but not as military structures.

And present inscription, engraved on what is possibly the base of a statue now in a house in Posto Santo, near the city of Angra on Terceira Island. It was also possible to establish the origin of the material composing the base for the inscription: about 4 Km away from where it is now (Figure 13). The association of these monuments with an inscription of Dacian origin confirms an occupation of the island earlier than what is generally accepted.

The base of a light coloured volcanic rock, trachyte, which is rough on the touch, shaped round as a column and inscribed outside by about 2/3 of the round. The inscribed stone is conserved in a private home, situated in the city of Angra Heroism, Terceira Island already since several decades. The circumstances of the found are not known. The stone base was originally at about 4 km at a place named Posto Santo, where the trachyte rock is present.

According Prof. Herbert Sauren, we can see two lines of script, some letters very well known as Latin or Greek majuscules, but others with strange forms and irregular in height (Figure 14). A base

for a statue with the given size was an important monument. The lost statue was also very important. We can guess the statue of a governor, of a king, or of a god.

The beginning of the inscription is broken. The letter D at the beginning of the second line marks the limit of the inscription at the left side. The last letters of both lines are preserved. The inscription could be read when the reader stood in front of the statue.

Transliteration, vocalized form, translation

[OD]ROY ELOFC ION

D A C C I C OFC

Odroy Elo'ōs 'Ayon / Dacciōs The'os

Odroy, the Lord of the gods,  
the god of the Dacians.

Spanish investigator Antonio Rodriguez Colmenero, (Professor at the Santiago de Compostela University) interprets the epigraph in another way: Converging in Roman times however should not be a base of a statue but a milestone. The scientist also reads other content at the beginning of the text: OPELIO (indeterminate text) and at the end fecit, usually the inscriptions of Emperor usually have: IMP M. OPELIO SEVERE Macrinus, but according to the author that is not text that is in the epigraph.

Prof. Félix Rodrigues from Azores University studied the rock composition and compared with rocks found nearby. Initial visual inspection indicated that the rock is a trachyte or ignimbrite. It was determined that the rock is pyroclastic, frequently associated with high temperatures materials derived from pyroclastic flows from a volcano. During an eruption, these remain close to the ground due to their density being higher than that of the surrounding atmosphere. With a 2 to 50 times magnifying glass, we can easily observe a dacitic composition with silicate minerals, where fayalite and quartz are inserted. The granulometry of this rock is fine and semicrystalline. The size of the phenocrysts ranges from 1 to 10 mm, and that of the vitreous matrix, than a millimetre. The rock is composed of minerals of two distinct granulometries, large and small. The larger minerals (phenocrysts) are less numerous, the smaller ones (the majority) constituting the matrix. The same dacitic composition is observed in the rock of a stone bench situated in the garden of a house where the engraved stone is. It has exactly the same matrix and the same phenocrysts.

Rocks from Mount Brazil (city of Angra do Heroísmo, Terceira Island, Azores) were collected and analysed, as we can find there highly compacted surtseyan tuffs. The matrix of the welded trachytes or ignimbrites from Mount Brazil presents a different granulometry from that of the rock here studied, as it

is composed of pumice. This was observed with the same type of magnifying glass used in the analysis of the rock with the inscriptions.

## Bibliography

- AGOSTINHO, J. Achados Arqueológicos nos Açores, 1946, *Açoreana*, vol. IV, fasc. 1, 101-102.
- AGOSTINHO, J. As Moedas Cartaginesas do Corvo, 1947, *Boletim do Instituto Histórico da Ilha Terceira*, Angra do Heroísmo, 1947.
- CASSON, L. *Archaeological Exploration at Corvo*, in *Archaeology*, May/June 1990, 50-55.
- HOWSE, D., "Navigation and Astronomy - I: The first three thousand years", *Journal of the British Astronomical Association*, vol.92, no.2 (1982), 53-60.
- Écriture: [www.histoiredudroit.org](http://www.histoiredudroit.org) Antiquité préromaine / Iberica Semitica / Écriture.
- FRUTUOSO, G., 1590: '*Saudades da Terra*' volume VII. Góis, Damião 1567. 'Chronicles of Prince D. João', chapter IX.
- GOMES, F. P. *A Ilha das Flores: da Redescoberta à Actualidade*, 1997, Câmara Municipal das Lajes das Flores, Lajes das Flores, 18-19.
- GUEDES, J. and CORREIA H.S., *Covas de Cereais da Ilha do Corvo*, 1997.
- HENNIG, R, *Archäologischer Anzeiger*, 1927, 11-19.
- HENNIG, R. Erreichung der Azoren durch die Karthager und die Frage einer Früher Kenntniss Amerikas, 1953, *Terrae Incognitae*, vol. III, chap. 19, 138, Leiden.
- Sauren H., «Un procès de calomnie, époque préromaine avant la lex Julia. Un seigneur accuse son ancien serviteur», *Revue Internationale du Droit de l'Antiquité*, Service des Facultés Universitaires Saint-Louis, Bruxelles, 2004, 259-279: [www.ulg.ac.be/vinitor/rida](http://www.ulg.ac.be/vinitor/rida)
- Sauren H. and Sidarus A., «As lápides de escrita ibérica do Museu Regional de Beja - Leitura e tradução», 2005, *Arquivo de Beja, Actas das III Jornadas / Congresso*, tomo I, Beja, 169-190.
- Sauren H. , (A)Y, «Island, Isolated Place. The Word in Punic and Iberian Inscriptions», *Boletín de la Asociación Española de Orientalistas*, 2005, Madrid, 41, 279-286.
- Sauren H., «The Iberian inscriptions deciphered. Internal proves», *El Periodo Orientalizante. Actas del III Simposio Internacional de Arqueología de Mérida: Protohistoria del Mediterráneo Occidental 2003*, 2005, CSIC, Instituto de Arqueología, Mérida, Anejos de AEspA 35, 519-534.



- ISSERLIN, B.S.J., Did Carthaginian Mariners reach the Island of Corvo (Azores)? Report on the Results of Joint Field Investigations undertaken on Corvo in June 1983. *Rivista Di Studi Fenici Sommari Del Volumi XII*, 1-1984, 31-46.
- MEDEIROS, C. A.: *A ilha do Corvo*, 2ª edição, remodelada e actualizada, Livros Horizonte, Lisboa 1987 (1ª edição, 1967).
- RIBEIRO, N. M. DA C. and HUTTU, J.; “Corredor dos Mouros”, *Investigation Report. In Techne 3* (1997). Arqueojovem. ISSN N.º 0872-6817. Depósito legal: 93741/95. Tomar 1998, 99-111.
- RIBEIRO, N. M. DA C. “O Povoado da Paixinha” – Estudos Preliminares, *Boletim Cultural 21. Câmara Municipal de Tomar*, Outubro de 1997. Montagem e Impressão: A Gráfica de Tomar. Depósito Legal n.º 446/82. 215-254, Tomar.
- RIBEIRO, N. M. DA C., JOAQUINITO, A., PEREIRA, A.S. - Phoenicians in The Azores, Myth or Reality? Abstract, in 15<sup>th</sup> Symposium on Mediterranean Archaeology. Catania University – Sicily (March 3-5<sup>th</sup>), 2011.
- RIBEIRO, N., JOAQUINITO, A., PIMENTA, F., SAUREN, H., RODRIGUES, A. F., COSTA, A., PEREIRA, A. S., JULIANO, M. F., FERNANDES, J., FREITAS, R., VENTURA, R., TIRAPICOS, L., “Protohistoric and Historical Atlantic Navegation – Unpublished Archaeological Sites in Azores and Archaeoastronomy Orientation of some Monuments”, Évora, SEAC 2011
- SCHAWALBACHER, W., *Schweizer Münzblätter*, November 1962, 22 ff.
- STUCKEY, J., *Tanit of Carthage*, 2009, Lammas, Vol 8-4.
- VON HUMBOLDT, A., *Examen Critique de la Geographie du Nouveau Monde*, 1981, Arquivo dos Açores, Universidade dos Açores, Ponta Delgada, edição fac-similada pela edição de 1881, vol. III, 111-112.



Figure 1 - Structures excavated in the rock in the island of Corvo.



Figure 2 – Small canals, basins, possible chairs excavated from the outcrop.





Figure 3 – postholes of various dimensions excavated from the outcrop.



Figure 4 – Localization of hypogeal structures found on Mount Brazil





Figure 5 – Hypogea composed of two chambers.



Figure 6 – Detail of the interior wall of the chamber, with a small basin.





Figure 7 – Hypogea 4, 5 and 6.



Figure 8 – General view of structure 4.



Figure 9 – Detail of the four almost circular sculpted cavities inside structure 4.

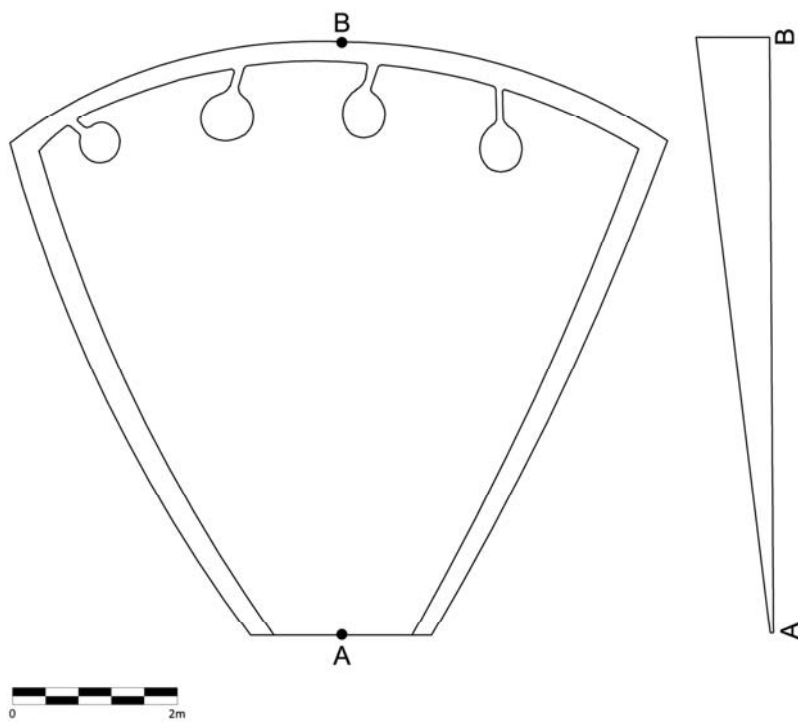


Figure 10 – Plant of structure 4.





Figure 11 – An excavated reservoir in structure 5.



Figure 12 – An anthropomorphic niche in structure 6.



Figure 13 – Inscription engraved on what is possibly the base of a statue.

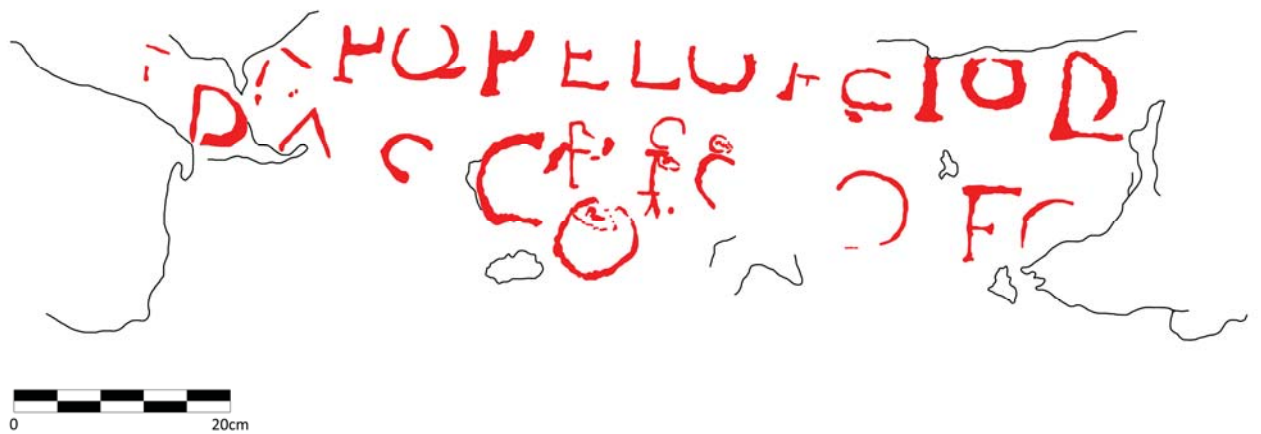


Figure 14 – Survey of the inscription.