



Gardens & Landscapes

Harmony in Solitude: Ecological and Cultural Forces Shaping the Religious Community of the Convent of Arrábida Settlement

Paula Antunes Medeiros

DOI 10.2478/glp-2024-0005

Gardens and Landscapes, Sciendo, nr 8 (2024), pp. 39-52

URL: <https://content.sciendo.com/view/journals/glp/glp-overview.xml>

ABSTRACT

From the perspective of the history of science and technology, this article explores the reasons that lie behind the choice of the Serra da Arrábida, located on the Setúbal Peninsula south of Lisbon, for the settlement of a longstanding religious community. It argues that the biophysical characteristics of the landscape's southern slope subunit, and the cultural meaning and historical evolution of the landscape, fostered the establishment of a convent as well as of a spiritual *desertum*.

Keywords: landscape, religious community, Arrábida Mountain, ecology, culture

ARTICLE

Introduction

Rising above a topography of gentler reliefs, the Serra da Arrábida (roughly translated into English as Arrábida mountain chain, or conjunction of mountains) is recognized as an area of significant ecological and cultural value. It is known for its biological diversity, hosting a wide variety of unique flora and fauna. It is likewise a historically important space, featuring a rich heritage and archaeological evidence from different periods.

The Convent of Arrábida, dating to the sixteenth century, is one of the most remarkable elements of the cultural landscape of the Serra da Arrábida. It was founded by Friar Martinho de Santa Maria, a member of the Order of Friars Minor of the Observance, a branch of the Franciscan Order. Despite its modest community size, the convent played a pivotal role in the religious life of the area for three centuries, preaching and embodying the Franciscan tradition.

The location of the convent is intriguing, raising questions about why a religious community would choose to settle in such a remote and challenging mountain range, markedly lacking the optimal

conditions for survival. The Serra da Arrábida receives notably low precipitation, is characterized by limestone soils, and presents steep slopes. To understand the reasons behind this decision requires a more in-depth analysis of the historical, cultural, and religious circumstances of the time.

In this context, the organizational and management model of the conventual landscape finds its roots in both biophysical constraints and the cultural milieu. The Convent of Arrábida stands as a testament to the intricate interplay between nature and culture, weaving together ecological and social influences in a symbiotic relationship. Understanding this interaction is fundamental to unraveling the meanings that surround the religious settlement in the Serra da Arrábida. This article proposes to attempt such a clarification. It is structured into three main sections: the ecological landscape of the Serra da Arrábida, the cultural landscape of the same region, and the history of the convent itself.



Figure 1: The Convent of Arrábida. Source: Paula Medeiros

The meaning of nature in the context of the Convent of Arrábida

The Arrábida landscape displays both elements of a natural character, such as rocky outcrops, dense woodlands, karstic formations, and of a cultural character, associated with the historical process of humanizing the territory. This natural landscape, unique and biologically rich, has been transformed over time by humans into a cultural landscape, expressed most saliently on the southern slope. Among the most prominent components of this cultural landscape is the Convent of Arrábida, a construction that exemplifies a community's understanding of the interactions between natural factors such as vegetation, water resources, geology, mountainous terrain, climate, and soil.

The historical process of occupation and transformation of the landscape in southern Arrábida (the slope facing the sea, oriented to the south) was preconditioned by the relative (bio)climatic mildness of this area, and was facilitated by intelligent water management. These factors are part of its biophysical identity, which likewise encompasses geology and geomorphology, slopes, sun exposition, soil, flora and fauna. A biophysical study was conducted to better grasp the basic parameters of the zone the convent had chosen for its home, and the challenges it posed. Data was collected through the analysis of historical cartography, such as the *Geological Map of Portugal* (1952), the *Soil Map of Portugal* (1978), the *Military Map of Portugal* (2009), and the *Hydrographic Region of Sado and Mira* (RH6, 2016), along with topographic information provided by the Municipal Council of Setúbal. This information was incorporated into software such as AutoCAD and QGIS to generate novel composite maps.

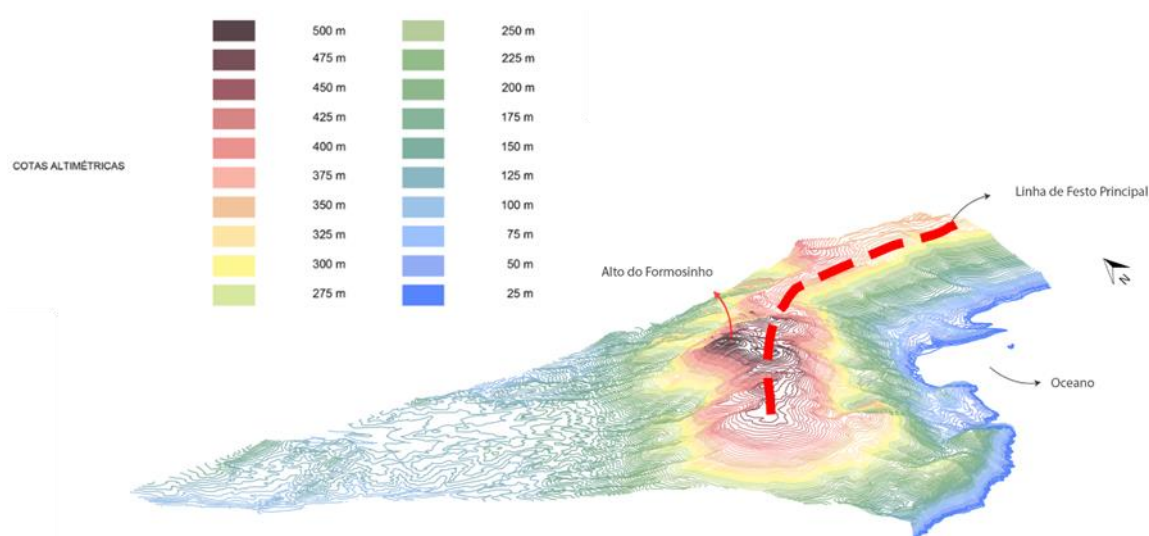


Figure 2: 3D map created with AutoCAD, showcasing the main ridge. Source: Paula Medeiros

The analysis of the Serra da Arrábida's biophysical features shows a main ridge (fig. 2), which divides the mountains into a northern and southern portion, with the convent constructed on the southern side. The highest point in the chain is called Monte Formosinho. At an altitude of 501 meters, it represents an important nexus for the distribution of rainwater. Part of the precipitation directly infiltrates the soil, facilitated by its permeable nature, thereby replenishing aquifer systems, while the other part is diverted by natural drainage lines. The hydrography of the southern side of the mountain range, associated with both underground and surface runoff, played a decisive role in two aspects of the convent's establishment. It was influential firstly in the selection of a site for the space itself, in proximity to one of the few springs of the area; and secondly, in the design and layout of its two hydraulic systems: that of the convent, utilizing groundwater, and that of the sanctuary, relying on surface runoff.

The convent is located on a slope with a steep gradient (25-45%), leading to the construction of buildings at different levels. The variation in elevation is overcome by a network of stairs perfectly

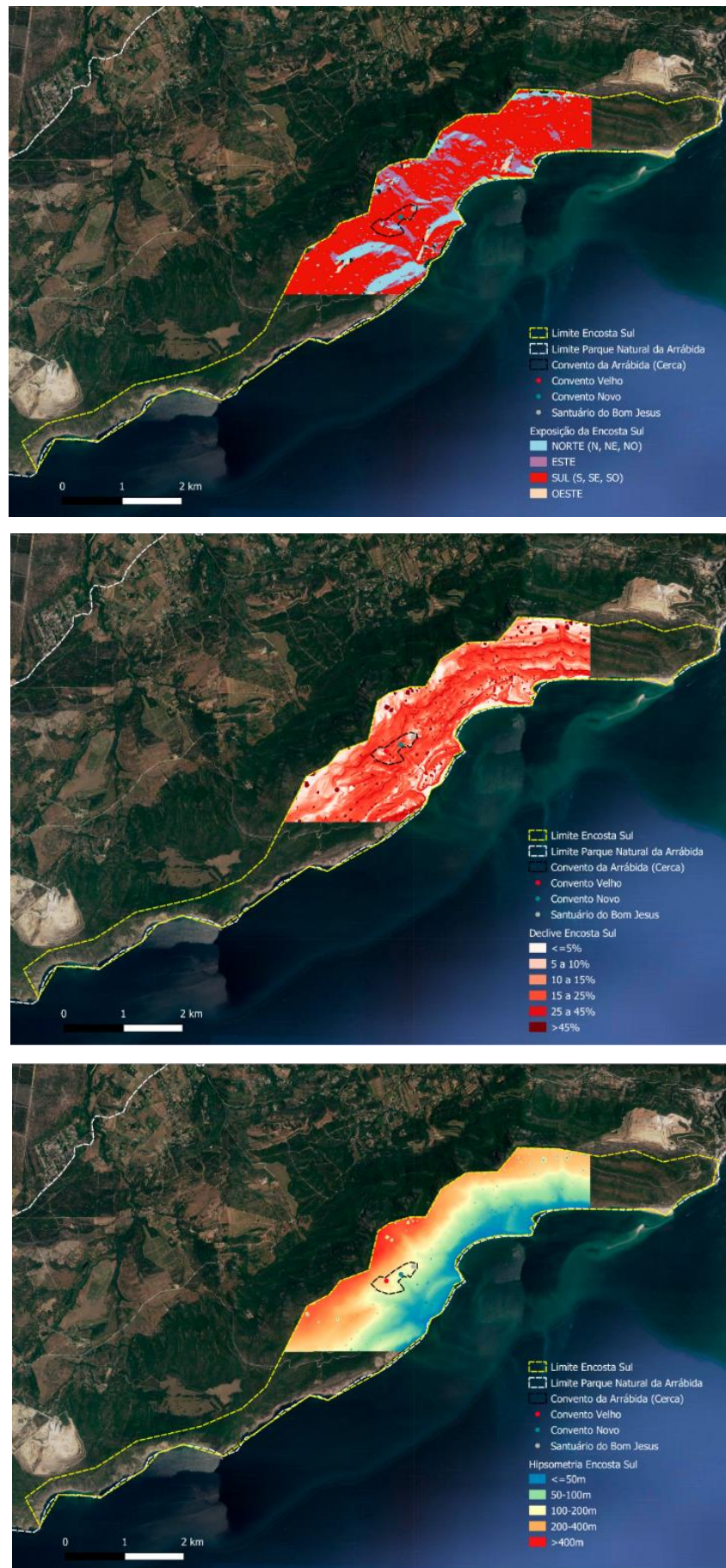


Figure 3: Maps created with QGIS, showing solar exposure, slopes, and topography. Source: Paula Medeiros

adapted to the terrain. The steep slope likewise necessitated artificial terraces supported by high walls for the installation of gardens. Notwithstanding the topographical challenges of this site, the southern side of the mountain chain offers notable advantages for human settlement – it is both sunny and sheltered from the cold winds that blow from the northern quadrant.

Despite relatively low levels of precipitation, the vegetation across the limestone mountain chain of Arrábida is rich, with local variations according to slope exposure, maritime influence, and microclimates created by differences in terrain. A dense forest covers its southern slope, considered by Orlando Ribeiro to be a “most precious remnant of a primitive Mediterranean woodland” (1935, 78). In addition to serving as a habitat for various wildlife species, this woodland is crucial in water and soil conservation, the supply of wood, firewood, fruits, and other food items. Moreover, it offers an evocative intangible dimension conducive to meditation and prayer; as Orlando Ribeiro (*ibid.*) described it, a place where “profound silence and subdued light prevail”.

Understanding the cultural landscape in the context of the Convent of Arrábida

The ecological landscape was not the only factor affecting the establishment of Arrábida’s religious community – the sacredness and mysticism associated with the mountain chain itself also played an important role.

The humanization of the Serra da Arrábida has been a continuous process with ancient roots, based on numerous slow cycles in which communities adapted to the natural ambiance via terrestrial and spiritual appropriation, transforming it into a distinctive cultural space. As in the rest of the Mediterranean Basin, the history of Arrábida’s human occupation began in the mountains and expanded towards the plains and sea (BRAUDEL 1995). In the case of the main mountain range, prehistoric settlements were likely triggered by the geographical and spiritual attractions the area presents (PATO 2016). The abundant natural caves in Arrábida were associated with human utilization since the Lower Paleolithic, not only serving as shelter and temporary refuge but also, importantly, as sites for ritual practices, including burials (GOMES & CALADO 2007).

With the emergence of Christianity in the area (from the 5th century AD onwards), certain caves, such as Grutas das Janelas and Vale das Lapas, show traces of the presence of Christian hermit monks, sometimes called “anchorites” (GONÇALVES 1571). This term derives from the Greek *anakhorésis*, which means “to withdraw” or “to retire”. With a lifestyle characterized by solitude, prayer, fasting, and manual labor, such hermits typically lived alone in remote locations such as deserts, forests, or caves (CASTANHO 2007). The caves of Arrábida were ideally suited to their spiritual requirements.

The Franciscans who settled in the Serra da Arrábida in the sixteenth century might have been inspired by the tradition of such hermit monks as had frequented the caves of the mountain range.

Moreover, St. Francis of Assisi, the founder of the Order of Friars Minor, was known to love nature and seek solitary places for prayer and contemplation.

Beyond these factors, the very ruggedness of the terrain may have added to the mysticism of Arrábida and contributed to the establishment of the religious community, an appeal intertwined with the concept of *desertum*, to be discussed in more detail below. These qualities are hinted at in the name “Serra da Arrábida” itself. The origin of the designation “Arrábida” is surrounded by theories. In the *Santuário Mariano e Histórias das Imagens milagrosas de Nossa Senhora* (1707), Frei Agostinho de Santa Maria remarks that

"The Arrábida mountains [...] were called by the ancients Barbaricum Promontorium; and by those inland it was called Rabida, which means angry, due to the roughness of its cliffs, continually bathed by the furious sea, beating against them, breaking into foam, and producing a horrible and annoying roar, in which poetically a fierce beast or a raging monster was imagined, which, due to pure fierceness, never ceases to foam and roar" (1707, 465).

More recent studies, such one offered in the *Vocabulário Português de Origem Árabe*, indicate that “Arrábida” derives from the Arabic *ar-rābitā*, meaning “fortified convent to guard the border” (MACHADO 1991, 76). Another hypothesis is put forth by Isabel Fernandes in *O Castelo de Palmela. Do Islâmico ao Cristão* (2004, 64), stating that the word “Arrábida” originates in the Arabic *ribāṭ* and means a “place of prayer”. Thus, while the etymology is still debated, it is evident that the name has long evoked a dramatic and untamed landscape.

A further reason for the settlement of the community was the religiosity that had coalesced around the mountains. The Serra da Arrábida had engendered myths that gave rise to the cult of “Nossa Senhora da Arrábida” (Our Lady of Arrábida), disseminated in manuscript and print over several centuries. Sources such as the *Espelho de Penitentes e Chronica da Provincia de Santa Maria da Arrábida* (1728) of Frei António da Piedade, and Frei Agostinho de Santa Maria’s *Santuário Mariano, e história das imagens milagrosas de Nossa Senhora, e das milagrosamente apparecidas em graça dos prègadores & dos devotos da mesma Senhora* (1707, 465–474) detail the relevant events, which will be summarized here.

Accounts generally begin with the departure of a merchant named Haildebrant from England towards Lisbon in 1215. One night, after several days of sailing, his ship encountered a great storm with a dark mist that put everyone in grave danger. The passengers, all Christian, neither knew where they were, nor could they do anything against the fierceness of the sea and the fury of the winds. Haildebrant, a devotee of Our Lady, had brought aboard a chest containing an image of Mary, which he carried up to the deck to ask for supplication. When he opened the chest to take up this image and pray, however, he discovered it empty. At this point, as the despairing passengers began to implore the heavens and God for help, a bright light appeared. Illuminating the night sky, it guided them to the coast of Arrábida.

In their desire to know the light's source, they climbed the mountains and there, discovered the very image of Mary that Haildebrant had carried aboard. As Santa Maria's retelling puts it,

All were amazed at so great a marvel, and grateful at the same time to the Lady for the singular benefit she had bestowed on them, they did not cease to give thanks to God, and also to his Most Holy Mother. They considered that the miraculous presence of the Holy Image in that place showed them that it had chosen it, and that it wanted to be venerated there, and thus they resolved not to remove it from that spot. (SANTA MARIA 1707, author's trans.).

With the permission of the Bishop of Lisbon, a chapel was built in the same place; Haildebrant himself decided to remain there. In the centuries that followed, this location, with its Hermitage of Memory, and the Arrábida mountains more generally became a pilgrimage site (fig. 4) (SANTA MARIA 1707).

Thus, the telluric dimension of the Arrábida landscape, which forms the basis of its mysticism and sacredness (PIEADADE 1728), is an unforgettable sensory experience that likely justified its occupation and transformation by the religious community that settled there. The force and power of the natural elements present – the steep mountains and open sea, bare rock and dense vegetation, limitless horizon and close sky – must have been the primary attraction for the foundation of the convent, supporting the spiritual and religious experiences associated with it.

As the hermits sought isolation, the Serra da Arrábida seemed to offer them the ideal conditions to establish their *desertum*, as they defined their landscape. This *desertum* is quite different from our typical concept of a desert, but



Figure 4: The Hermitage of Memory, built by Haildebrant in the thirteenth century. Source: Paula Medeiros

is symbolically linked by notions of withdrawal from the world and direct contact with nature, drawing inhabitants closer to God. Historian Jacques Le Goff, in *L'imaginaire medieval* (1985), explains that this sense of *desertum* can be developed even in the absence of aridity, as was portrayed in the Bible. A *desertum* is a place of judgment, dangers, and penance, and – crucially – the location where Jesus sought refuge and solitude. Thus, although on its face paradoxical, a forest like that of the Serra da Arrábida may also be a *desertum* (LE GOFF 1985).

Life at the Convent of Arrábida: Balancing Ecological Sustainability and Religious Devotion

The history of the convent begins with the first Duke of Aveiro, Dom João de Lencastre, an illegitimate descendant of the Portuguese crown and grandson of King João II. His connection with the foundation of the Convent of Our Lady of Arrábida begins in 1539, when he was 38 years old. During a trip to Spain to mourn the death of Emperor Charles V's wife Isabel, the daughter of King Manuel I, he encountered another pilgrim, Friar Martinho de Santa Maria. As Piedade recounts,

At this time, D. João de Lencastre, the first Duke of Aveiro, the first son of Master D. Jorge, the first grandson of the illustrious King D. João II, and the first general patron of this Province, who seems destined by God to enjoy primacy in everything, arrived at the same pilgrimage site, and upon meeting Venerable Fr. Martinho, he formed such a concept of his virtue that he did not rest until he shared it better through interaction and communication. (PIEADADE 1728, 13, author's trans.).

Martinho de Santa Maria was a Spanish friar belonging to the Order of Saint Francis. After twenty years in the province of Murcia, and experienced in the rigor of Franciscanism, he went to Rome to live among the Capuchos Barbados, known for their extreme penance. After a few years, still yearning for a solitary life and hearing that Our Lady of Guadalupe granted favors to those who asked, he decided to personally offer her a novena at his home, where he met D. João de Lencastre. In one of their conversations, Friar Martinho informed the Duke of his unfulfilled wish to live in isolation, stating that "[...] even though he sought [solitude] eagerly in the seclusion of his cell, he could not find it as his spirit desired" (PIEADADE 1728, 14). The Duke offered the Arrábida mountains as a place for Friar Martinho's spiritual retreat, as they were difficult to reach (preventing disturbances to his solitude), and provided access to the Hermitage of Memory, a consecrated site. Shortly thereafter, Friar Martinho was formally invited to come to Portugal, and he set out for the Serra da Arrábida accompanied by Friar Matinho Navarro.

The construction of the convent began upon their arrival, in 1539. Cells characteristic of Franciscan hermitages were built (now known as the rupestre component of the convent), adding to the Hermitage of Memory erected by Hildebrand. This historical core – the Old Convent – is enclosed by walls, with paths allowing one to navigate through dense vegetation, creating a mild microclimate and ample shade (PEREIRA 2007).

Friar Martinho and Friar Navarro lived there for just over a year, and with the departure of Friar Navarro and the arrival of Friar Diogo de Lisbon, São Pedro de Alcântara, along with Friar João de

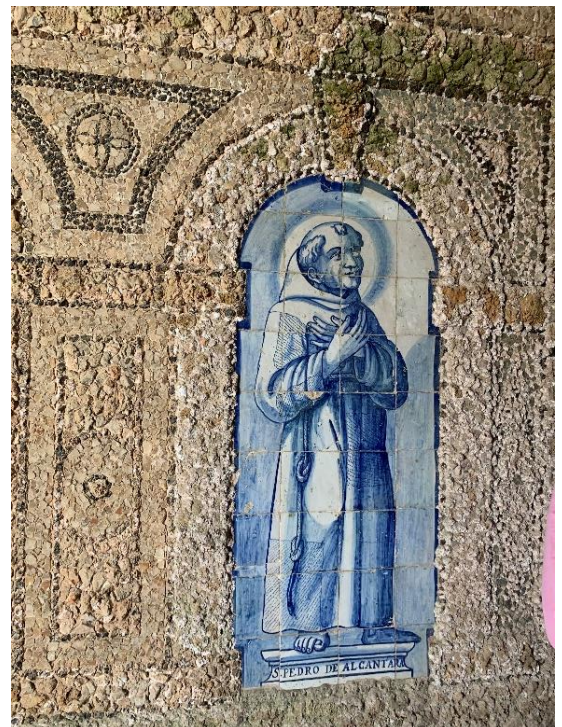


Figure 5: Images of Fr. Martinho de Santa Maria and St. Pedro de Alcântara in the Convent of Arrábida. Source: Paula Medeiros

Águila and Friar Francisco Pedraitá, four more cells were built. Describing these shelters as cells is almost hyperbole. Indeed, they resemble tombs – holes dug in the ground by the friars themselves (following the Franciscan Rule) – so narrow and low that an adult man could not lie down or stand up straight. The bare earth served as a bed, sometimes covered with leaves from the mountain. The cells were adapted from existing cavities in the limestone substrate, providing a modicum of protection (PIEADADE 1728).

São Pedro de Alcântara lived in the same cell that the famous Hildebrandt had, and this space later became the sacristy of the Hermitage of Memory. The hermitage (fig. 4), as described by Paulo Pereira in *Arrábida: Porta do Céu*, is charmingly simple, nestled in the rocks of the mountain forming one of the valley's boundaries. Its façade is low, with a rectangular door reachable by climbing two steps. The door frames are made of stone, while the rest of the building is of modest whitewashed masonry. Above the door is a small circular window surrounded by spirals and topped with a stucco finish, which unfortunately has lost its original color. At the back of the building, a niche houses the altar and the venerated image. Meals were taken in another cave, south of the hermitage, with the friars bending down to pass through the low entrance (fig. 6). Their fare was simple: bread, water, and occasionally some poorly seasoned herbs or vegetables. When bread was scarce, they went to nearby villages to beg for alms (PIEADADE 1728). The food they ate every two or three days was only sufficient to avoid starvation (SÁNCHEZ 2013).

In this brief description of the Old Convent, one can observe the poverty and rusticity in which the friars lived, depriving themselves of any unnecessary comforts and consciously choosing to live in

a desolate environment. The daily routine of the early friars was marked by prayers, renunciations, and penances. This situation only changed with the visit of the General Father of the Franciscan Order in 1542, invited by the first Duke of Aveiro, who authorized the construction of a more permanent convent in Arrábida and the reception of novices through Friar Martinho de Santa Maria. Thus ended the eremitic ways of the Old Convent, and convent life in Arrábida entered a new phase (PIMENTEL 1992).



Figure 6: Cell and cave where the friars ate in the Old Convent. Source: Paula Medeiros

The life of this community, although no longer eremitic, was entirely devoted to prayers. They began the day by praying the matins. One friar stood vigil, and when midnight came, he rang the bell of the hermitage, waking up the friar furthest away. Having recited the Miserere together, they gradually woke the others, and the community proceeded to the hermitage to sing hymns. Afterward, they remained in prayer until the hour of prima (the first hour after sunrise), when Mass was celebrated, then prayed the terce (around nine a.m.) and returned to their cells until dinner time. Upon finishing dinner, they emerged from their cells to wait for vespers (sunset, six p.m.), where they prayed again, ending their day (PIEADADE 1728) (fig. 7).

The construction of the New Convent, in 1542, was organized in multiple levels. By harmonizing the architectural design to the natural slope of the site, gravity could be utilized for the capture and

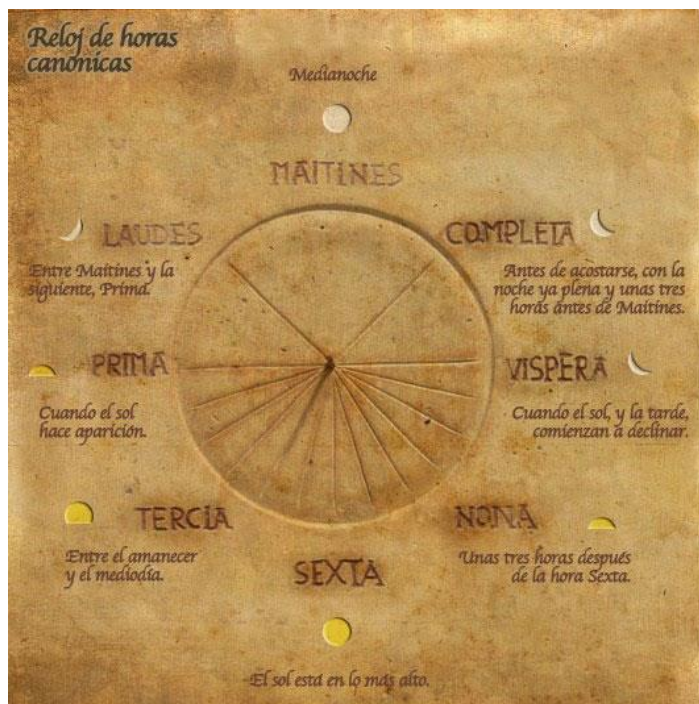


Figure 7: The Canonical Hours. Source: *La Liturgia de Las Horas*

conveyance of water. The building materials employed were local: stone, earth, wood, and lime produced from limestone. The project of the New Convent (fig. 8) included considerable additions to what had previously been a spartan eremitic enclave, with new supporting walls and an enclosure wall erected, together with hydraulic infrastructure (mines, wells, gutters, and tanks). Aside from being more practical and cost-effective, the use of local materials contributed to the cultural identity of the region. The convent blends more seamlessly into the landscape and establishes a connection with the history of the surrounding space.

In its initial phase, the New Convent is described as having a few cells scattered across various parts of the mountain (CARDOSO 1751). The church had three altars, with the largest dedicated to Our Lady of Arrábida. The refectory and kitchen were situated in the wilderness, and the monks would sometimes traverse rocky terrain and thorns to reach them. The Duke had refrained from further constructions in the convent in accordance with the wishes of Friar Martinho de Santa Maria, who had a disdain for extravagance and desired to keep the built space in accordance with the rules of the St. Francis (PIEADADE 1728). An enclosing wall was, however, added in 1571 (at the behest of Dom Jorge de Lencastre), in order to address the discomfort felt by the friars, exposed to contact with pilgrims visiting the area.

Over the years, the convent underwent changes depending on which Duke of Aveiro was in possession of the Serra da Arrábida. Clusters of cells appeared across the mountain; sacristies, choirs, a pilgrimage house, and chapels were built; and in 1640, the Sanctuary of Bom Jesus was erected, among other modifications.

In the conventual space of Arrábida, both the water supply system for the New Convent and the water supply for the Sanctuary of Bom Jesus were aligned with the optimal utilization of what nature provided. This approach was rooted in the specific knowledge of the landscape held by the religious community, keenly aware of the interaction between terrain, geology, hydrography, and climate. While the water supply to the convent relied on groundwater through a set of robust hydraulic structures (wells and mines, settling tanks, gutters, springs, and tanks), the Sanctuary sourced its water from rain, managing surface runoff to direct and store the flow.



Figure 8: The New Convent. Source: Desidério Batista

The proximity of the Sanctuary to a drainage line coming from Alto do Formosinho allowed water collection through a trench, which was then stored in a large-capacity cistern. The existence of a building (*mãe de água*) adjacent to the cistern enabled flow control for the aqueduct that transported water to the building and the garden. The presence of two interconnected settling chambers, located just before the water entered the cistern and drained by the main channel, demonstrates the efficiency of the hydraulic system. Water cleanliness and flow control ensured the intelligent management and use of water as a scarce and valuable resource, forming the basis for the sustainability of the religious community.

Final Considerations

The Serra da Arrábida constitutes a major symbol of Portuguese spirituality, with the Arrábida Franciscans playing a significant role in this process. The hermitage, whether due to the ruggedness and isolation of the mountains themselves or the strict observance followed by the friars, made the community a landmark in the region's history.

The landscape of Arrábida is intimately connected with the ideals sought by the Order of Friars Minor of the Observance. It presented the community with a version of paradise, where they experienced the full force of the natural elements, both pleasing their eyes and supplying them with the peace, comfort, and silence they sought. The European reimagining of Biblical *desertum* plays out vividly

at Arrábida, where the trials (both climactic and physical) by which believers were to be tested could as readily be embodied by the forest as by more arid terrains.

The mountain landscape was not only crucial to the location of the convent, but also shaped its construction and the maintenance of the religious community. The dense woodland covering the Serra da Arrábida was essential for water and soil conservation, fruit production, and the supply of wood, all critical factors for the survival of the religious enclave.

The community at Arrábida was never large, and the auspices of the convent itself aligned with the requests of Friar Martinho de Santa Maria: simple, and poor. Additions and modifications over time adjusted to the topography and slopes, transforming the convent into an “amphitheater” of myriad minor structures, a kind of labyrinth of stairs, terraces, gardens, cells, and chapels. These scattered buildings, nestled into the steep slope, were constructed with limestone masonry plastered with lime and sand mortar, adorned with carved stone details, limestone slab pavement, wooden elements in the upper floors, thatched roof tiles, and stucco. It is a monument to vernacular architecture, and making the most of what nature could offer, an ethos that persisted throughout the phases of the convent’s construction.

ACKNOWLEDGEMENTS

The author acknowledges the Portuguese Science and Technology Foundation for funding the project HOR- TO AQUAM SALUTAREM, PTDC/HAR-HIS/28627/2017.

REFERENCES

- ANNAES DA ACADEMIA DE ESTUDOS LIVRES (1903). *Uma excursão a Serra da Arrábida*. Lisbon: Imprensa Commercial.
- BRAUDEL, F. (1995). *O Mediterrâneo e o Mundo Mediterrâneo na Época de Felipe II* (Volume 2). Lisbon: Publicações Dom Quixote.
- CASTANHO, G. (2007). *Entre a Ermida e a Cidade: solitários sociáveis e a produção de significados no século XII*. São Paulo: Programa de Pós-Graduação em História Social.
- CARDOSO, L. (1751). *Diccionario Geografico, ou noticia histórica de todas as cidades, villas, lugares, e aldeas, rios, ribeiras, e serras dos Reynos de Portugal e Algarve, com todas as cousas raras, que nelles se encontraõ, assim antigas, como modernas* (first edition). Lisbon: Regia Officina Sylviana and the Academia Real.
- GOMES, M. and CALADO, D. (2007). Conjunto de cerâmicas da gruta da Ladroeira Grande (Moncarapacho, Olhão, Algarve) e os santuários subterrâneos, da Idade do Bronze Final, no Sul de Portugal. *Revista Portuguesa de Arqueologia*, 10(1): 141-158.
- FERNANDES, I. (2004). *O Castelo de Palmela. Do Islâmico ao Cristão*. Lisbon: Edições Colibri/Câmara Municipal de Palmela.

- LE GOFF, J. (1985). *L'imaginaire medieval*. Paris: Gillimard.
- PATO, H. (2016). *A Sacralização da Arrábida*. Setúbal: LASA-Liga dos Amigos de Setúbal e Azeitão.
- PEREIRA, P. (2006). *Convento da Arrábida: a Porta do Céu*. Lisbon: Fundação Oriente.
- PIMENTEL, J. (1992). *Arrábida: História de uma Região Privilegiada*. Lisbon: Inapa.
- SANCHÉZ, M. (2013). *Vida y Obra de San Pedro de Alcántara*. Seville: Apostolado Mariano.
- SANTA MARIA, A. (1707). *Santuario Mariano, e história das imagens milagrosas de Nossa Senhora, e das milagrosamente apparecidas em graça dos prègadores & dos devotos da mesma Senhora* (first edition). Lisbon: Oficina de António Pedrozo Galvão.
- PIEDADE, A., JESUS MARIA, J., and SILVA, J. (1728). *Espelho de Penitentes e Chronica da Provincia de Santa Maria da Arrábida* (first edition). Lisbon: Oficina de Joseph António da Sylva.