

Abstract

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São Pedro de Canaferrim is located in the only sub-volcanic massif of the Portuguese Estremadura, commonly designated the Serra de Sintra and considered by geographers, in spite of its low altitude (which reaches 529 m), a true mountain. This geographic accident rises from the hilly lowlands that stretch to the north, to the south, and, to the west, to the Atlantic Ocean.

The archaeological site is situated to the south of the town of Sintra, on the southeast slope of the Castelo dos Mouros, between 395 m and 402 m in altitude. The Neolithic occupation is found dispersed on several platforms, in a location well-sheltered from the dominant NNW winds and characterised by the presence of granitic boulders forming natural rockshelters, and not far from a small tributary of the Colares River. The site is a hill-altitude site and is, on average, 200 m higher than the surrounding lowlands.

Until now, it has been possible to identify three loci with evidence of Early Neolithic occupation:

- locus 1, in the location where the ruins of the Romanesque church of São Pedro de Canaferrim are found, next to the path by which one accesses the nucleus of the Medieval fortification;
- locus 2, a few meters from locus 1, although on a lower platform, and also reached by the path to the Castelo dos Mouros;
- locus 3, in an area of difficult access, under a rockshelter formed by large granitic blocks.

Although the first two locations were the object of archaeological excavations, the knowledge that we possess of locus 3 is the result of only surface collections.

São Pedro de Canaferrim can be defined, in general terms, as the location of successive occupations that involved major disturbances to the prehistoric levels. During the period of Moorish occupation, there were silos dug in locus 2, and in locus 1 there was the construction of the Romanesque church, as well as its restoration that was carried out by D. Fernando II in the 19th century.

The interpretation of the site in terms of its Early Neolithic occupation must be based on the evidence from the two best-known loci. The surface data only confirm the domestic use of the platforms along the mountain slope.

The identified structures, both excavated into the bedrock — a silo in locus 1 and the depression (UE 16) in locus 2 — suggest the existence of pits intentionally opened within the domestic space. In terms of structures, the available information for locus 1 is scarce. However, the silo contained, besides the rare ceramic fragments and one unclassifiable piece of flint, a significant fragment of a body and its handle, which probably corresponds to the only large storage vessel that was buried in this structure. On the other hand, the data from locus 2 provide information that define various uses for the negative structure (UE 16). The depositional processes of its fill (UE 4), reveal that its first use-phase was as a hearth,

after which it was covered by a refuse layer full of artefacts. Then, a post-hole was dug, which brought to the surface fragments of vessel 123. The vessel was, therefore, only partially conserved *in situ* in the hearth. The dimensions and even the forms of these pits are different from those that have been found until now in Portugal. Their parallels can be found in isolated areas of the Iberian Peninsula, namely in Catalunya.

In contrast to the rarity of carved and polished stone artefacts, the flaking of stone is amply documented. It consists of an industry exclusively in flint and based on blade tools. The assemblage, characterised by geometric microliths, abundant blade and bladelets — retouched or with use wear (and at times intentionally fragmented) — and a rotating awl (“taladro”), suggests an industry destined for the manufacture of sickle blades. This industry is a distinctive feature of the Cardial sites of the Spanish Levant. As at Cova de l’Or or at Cova de los Cendres, the presence of multipurpose flake tools is rare at the site.

The large number of ceramic vessels found and their state of preservation suggest an intensive occupation at the site. With respect to their forms, vessels with open forms have not been found; only vessels with closed forms and those with straight walls have been recovered. Large vessels with elements for suspension and prehension, at times associated with applied cords, demonstrate the uniqueness of the site not only with respect to some of the types present, but above all by the elevated number of the vessels represented. The assemblage includes other more commonly found features of sites in the Estremadura and in southern Portugal, such as the, so-called, false ‘folha de acácia’ (acacia leaf) decoration associated with double lugs or knobs, bands filled with diagonal parallel lines, punctate impressions, and even ‘punto y raya’ (dot and line). Undecorated vessels, rarely found in sites of the Early Neolithic, were also recovered.

However, there are clear differences between the pottery assemblages of locus 1 and locus 2. At the former, there are many large storage vessels associated with others of medium capacity and variable shapes. At the latter, there are medium-sized vessels, plain or decorated and with signs of burning (suggesting their use for cooking), as well as plain drinking vessels.

The presence of domestic animals (ovicaprids) has been documented at the site, suggesting that it was associated with herding and its annual rounds in which herds were brought to the uplands during the summer. However, this evidence must be integrated with that for storage facilities, indicated both by the presence of large vessels and the negative structures excavated in the bedrock, as well as that for specialised activities in the working of blades and bladelets, whose use wear suggests the gathering of plants.

This settlement provides indications for the presence of a group of herders who hunted and gathered, who were bearers of a clearly Neolithic material culture, and who chose a mountain at which to live, at least during part of the year. Although the site was difficult to access, owing to the rugged terrain of the Serra, the mild climate would not have prevented the presence of groups during the colder seasons. In this way, the site of São Pedro de Canaferrim could represent repeated seasonal occupations throughout the year, during which resources as diverse as pasture for the animal herds, wild fruits (which could have been pine nuts and acorn), plants (namely medicinal), and substances rich in sugar (such as honey), were obtained and associated with the practice of storage.

The radiocarbon dates obtained for level 4 (ICEN-1151 and ICEN-1152), taken from charcoal samples and statistically identical, point to an occupation that would have occurred between the end of the 6th and the beginning of the 5th millennium BC. In light of the data for the absolute chronology that are available, it is possible to state that the assemblage at São Pedro de Canaferrim, which includes incised ceramics, non-impressed cardial ware

with applied decoration, and a microlithic industry, might be, in part, contemporary with the earliest horizon identified at Gruta do Caldeirão, with its funerary deposit associated with cardial pottery, geometric microliths, and adornment made on marine and freshwater shells.

Cardial ware should not, therefore, be systematically used as a chronological indicator that allows researchers to advance in date all those assemblages in which it is not found. São Pedro de Canaferrim points to the existence of groups with non-cardial impressed pottery in an early phase of the Neolithic, namely the transition from the 6th to the 5th millennium BC.

Within the geographic scope of this study, that is, the peninsula of Lisbon, there are a variety of types of Neolithic sites: natural caves, fields of 'lapias', shellmiddens, and high-altitude sites. This simple pattern demonstrates the uniqueness of a region in which are brought together the general geomorphic features of the south of Portugal, at the same time producing a special region in itself; these features include the extensive fields of 'lapias' (Granja dos Serrões, Pedra Furada, and Negrais), the granitic massif of Sintra, the long oceanic coast, and the karstic landscape. Therefore, in addition to São Pedro de Canaferrim, other archaeological sites on the coastal platform to the north of the Serra de Sintra, such as Parque das Merendas, Penedo da Cortegaça, Olelas, Pedraceiras, Barruncheiros, Fonte Figueira, and Praia de São Julião, were also studied. These sites are made up of chance finds, surface collections, sites that were almost totally destroyed, and old excavations, but they have artefact assemblages, particularly ceramics, that suggest the existence of occupations during early phases of the Neolithic.

An analysis of the decorative motifs and of the systems of suspension and prehension of the ceramics makes it clear that a great variety of these are found at São Pedro de Canaferrim. The study of these elements shows that there are no specific techniques for creating each motif or even each decorative pattern. At São Pedro de Canaferrim, the presence in the same context of different execution techniques for the same decorative motives and patterns makes it, therefore, impossible to establish relative chronologies based on the presence or absence of incised and impressed pottery. In terms of vessel forms, decorative motives and patterns, as well as manufacturing techniques, it is not possible to establish any difference between ceramics from São Pedro de Canaferrim and those found at the other Neolithic sites mentioned above.

In terms of settlement strategies, São Pedro de Canaferrim is the only example of an Early Neolithic mountain site known for central and southern Portugal. Thus, the site deviates from previous models of settlement pattern established for this chronological-cultural phase.

With the aim of identifying the areas regularly exploited by the group that lived at São Pedro de Canaferrim, site catchment analysis was applied, taking into account the topographic features of the region. The results were, instead of circular concentric areas, irregular forms that reflect the uneven terrain. Taking one hour as the approximation for travel time from the site, the resulting catchment area includes primarily mountain resources and the Colares River Valley. The river and its flood plain, in addition to documenting the existence of an ancient estuary and the possibilities that it represented in dietary terms, would have provided easy access to the Atlantic coast with a canoe or a raft. However, the most available resources appear to have been the terrestrial ones: pasture for the sheep and goats, plenty of game, wild fruits, and even arable land within the mountain itself.

Access to this mountain site was through two valleys, one defined by the Monte do Castelo (where the site is located) and the Monte do Sereno, and the other that descends the

Monte do Castelo by the Parque das Merendas, following the course of the Sintra River until it reaches the Colares River. The settlement strategy of this mountain site reveals a profound knowledge of the landscape, which explains the establishment of this site in a place from where access to more distant areas could be controlled, translating into a strong link to the Colares River Valley and the arable lands to the east.

Although the first occupation of São Pedro de Canaferrim is Neolithic, this site must be understood in light of the Epipaleolithic site of Penha Verde (360 m in altitude), the earliest settlement in the Serra de Sintra. Reflecting a continuity in the exploitation of the mountain resources, the site might have revealed, upon first analysis, the exclusive practice of hunting and gathering. However, the analysis of the artefacts and structures, as well as the scarce ecological data that have been obtained until now, point to a new way of exploiting the mountain, which had favourable conditions for herding animals, complemented by big game hunting and farming. The oblique way of hafting the blade, with the retouched edge attached to the handle and the sickle sheen on the cutting edge, documents the use of composite sickles for the cutting of grasses. Thus, the domestic activities identified at the site indicate the existence of a group of skilled herders, who collected and stored – probably cereals –, and, in general, carried out a Neolithic way of life.

São Pedro de Canaferrim must be considered, however, within the context of a settlement pattern that includes permanent open air settlements associated with agriculture, sites where specialised activities, such as herding, fishing, or gathering, were carried out, and burials. In the case of this site, and taking into account its particular environment, we must also include specialised sites near the coast and those near estuarine areas, as well as 'lapias' fields and high altitude sites.

In their occupation of this location in the Serra, the group at São Pedro de Canaferrim must have had a profound understanding of the landscape in order to occupy one of the more precipitous peaks of the mountain, but one which is also linked directly with the lowlands.

From a human perspective, there are two ways of seeing this mountain: one, from the point of view of people who live at a certain distance from it, who see it as something not always visible in the skyline, and two, from the point of view of people who live among its rugged granite blocks. The latter is that of the group which occupied São Pedro de Canaferrim.

Any understanding of this geographic area will have to take into account the rarity of the available knowledge for the Late Mesolithic. In fact, there are no sites which document the transition to the Neolithic. Thus, between the most recent Epipaleolithic dates and the oldest Neolithic dates, there remain almost two thousand years about which nothing is known in this area.

The site of São Pedro de Canaferrim, situated on a small mountain, was probably associated with the annual movements through the territory, which took the herds to the green, higher pastures during the summer. Its situation in the landscape demonstrates a direct relationship with the low, hilly lands to the north and east and the proximity of excellent vantage points over the surrounding area. More than an example of transhumance, the occupation of the Serra, and specifically the settlement of a group in this location, provides evidence for the vertical exploration of the Massif, which was tied into the dynamics of occupation of the coastal platforms that extend to the north and to the south.

The material culture of these herders, namely the ceramics, situate it within the vast Mediterranean world. However, the analysis of decorative motives and patterns reveal characteristics that define a specific regional area. The best documented group, in numeric terms, is the impressed or incised 'ear of wheat' decoration, usually called 'false acacia leaf'.

The best preserved vessels are profusely decorated and bear metope-like decorations, whose fields (which tend to be rectangular) alternate with undecorated areas. Handles ending in lug-like forms or lug-like decorations in a series are also present. Close parallels can be found in the nearly intact vessels of Lapa do Fumo, Praia de São Julião, Gruta do Correio Mor, Gruta da Senhora da Luz, Lapa do Suão, and in a less obvious way, in small fragments, such as those at Abrigo das Bocas, Vale Pincel I, the upper levels of the shell middens of the Tagus, and even from sites in the interior of the Alentejo. Nevertheless, ceramic fragments with 'ear of wheat' decoration cannot be considered universally present on Early Neolithic sites, as they are absent from sites such as the caves of Casa da Moura and of Furninha, located in the northern limit of the study area.

The spread of these ceramic types, which is impossible to document precisely in light of the many unpublished assemblages, might indicate the presence of a 'Neolithic effect', consistent with the Early Neolithic, in the transition from the 6th to the 5th millennium. In this period, groups with domestic animals and with a new flaked stone industry, without connection to the Mesolithic industry, appeared in this area. A distribution map showing the presence of globular vessels with 'ear of wheat' decoration demonstrates the existence of a formal and decorative group scattered through the Lisbon and Setúbal peninsulas, in contrast to the limestone massif of the Portuguese Estremadura, where it is practically unknown. Its presence in the limestone area of the northern Estremadura, in the Rio Maior, and, in a more tenuous way, in the interior of the Tagus and the Sado estuaries might be evidence of the eastward progression of groups from the coast through the river valleys.

Based on the ceramic assemblages, it is possible to define two areas. One is clearly coastal; it includes the terminal basins of the Tagus and the Sado Rivers, with peripheral associations with the interior of the estuaries and the calcareous zone. The other demonstrates the direct relationship between the massif of the Estremadura and the Tertiary basin of the Tagus. The western Estremadura, in addition to the frequent presence of decorated ceramics with 'ear of wheat' motifs, raises other questions of the assemblages, namely the occupation of high-altitude sites in the early phases of the Neolithic.

The significance of these patterns will have to be modified in the record of some sites occupied over long periods, from the Neolithic to the Copper Age. A settlement on a hill-top does not possess the same significance for different cultural groups. It is human action which transforms a particular space into a place of grazing, hunting, or into a fortified site. High altitude sites were not always associated with defence; this aspect was only developed during a specific phase of their occupation - a fact which has been emphasised by scholars of the Chalcolithic.

The archaeological record for these kinds of sites, in clear unbalance with their almost unknown presence in the lowlands, is owed to the history of research in lowland Estremadura. While research along the coast was, in part, carried out in response to geological questions, leading to the detection of sites dated to between the Paleolithic and Mesolithic, archaeological work was directed, above all, to the discovery of megalithic monuments and fortified settlements.

Discovering archaeological sites with Early Neolithic assemblages force us to consider the existence of specialised sites, probably related to seasonal occupations. Thus, a complete picture of Early Neolithic settlement patterns can only be attained through systematic survey of the coastal platforms that surround the Sintra massif. In this way, base camps, which have not yet been found, might be recovered. Keeping in mind its exceptional nature, São Pedro de Canaferrim remains, nonetheless, a starting point for our understanding of the first Neolithic groups of central and southern Portugal.