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Paleolithic occupations in the Monforte de Lemos Basin (Lugo, Galicia)

Introduction

The information available about the Paleolithic in the north west of the Iberian Peninsula, particularly inland Galicia, is scarce and corresponds to accidental and sporadic finds. The only finding recorded for the Monforte de Lemos Basin (province of Lugo) was a handaxe in Vilaescura (Sober) in the mid twentieth century. Systematic research of the area started in 2006 as a consequence of accidental finding by an amateur but the findings from recent years have demonstrated the existence of a significant Paleolithic settlement in this area.

The Depresión de Monforte, irrigated by the river Cabe, is a tertiary basin surrounded by higher Paleozoic and Hercynian areas, which reach 600m high to the west (Chantada area) and 1,600m to the east (Serra do Courel). The average height of the Cabe valley is 290 metres above sea level. The origin of the Monforte basin, with a surface area of 175 Km², is tectonic, following the Hercynian fault lines that exist in a WNW-ESE direction. Following a neotectonic episode and subsequent fluvial rearrangement, the Pleistocene sediment linked to the paleo-channels and alluvial fans covered the banks with tertiary silts and clays of a lacustrine environment. These Quaternary deposits, arranged in a sequence of flat surfaces, are identified as river terraces, glacis and pediments (Ameijenda 2011).

Arqueological surveys

Systematic surveys, carried out between 2006 and 2010, were conditioned by the dense vegetation, which restricted the extension of the explored area. However, more than eighty open air artefact scatters were discovered, which correspond to

Lower, Middle and Upper Paleolithic. These locations have different entities, from sites with dozens of artefacts per square metre to others with just one isolated finding (Fig. 1). In addition to the surveys, test pits were dug in places whose concentration of artefacts could suggest the presence of archaeological sites in a stratigraphic context (As Lamas and Valverde in the Monforte Basin, and Pedras in the granite plateau of O Saviñao) (Fábregas *et al.*, 2009; 2010). Findings were also discovered in stratigraphic context in the sites of O Regueiral and Áspera (Rodríguez *et al.*, 2008).

The geo-archaeological work has allowed us to reconstruct a relative chronological framework in accordance with the characteristics of the Quaternary surfaces and the technological interpretations of the lithic assemblages (de Lombera *et al.*, 2011). The majority of the sites located could be assigned to Mode 2 or Acheulean lithic industries. Based on the topography and morphometrics of the Quaternary deposits (considering river terraces, glacis and pediments), 7 levels of erosion were identified on the sides of the basin (Fig. 1) (Ameijenda, 2011). The majority of the archaeological findings are located in intermediary levels (N4 and N5), whereas their presence in the other levels is scarcer, except in N1. The oldest evidence, in accordance with the morphotechnic characteristics and the sedimentary contexts, are located in Chao de Fabeiro (Erosion level 7), on the north bank of the Basin (Fig. 1). At this site, 26 knapped tools were recovered, mainly in quartzite. The configuration strategies are focused in the production of pebble tools. The presence of handaxes and chopping tools and the orthogonal, longitudinal and, to a lesser extent, centripetal reduction sequences suggest their ascription to Mode 2. The majority of Mode 2 sites are located in the intermediary surfaces (erosion levels N5-N4). In N5, the most significant scatters are those of Chao Vilar

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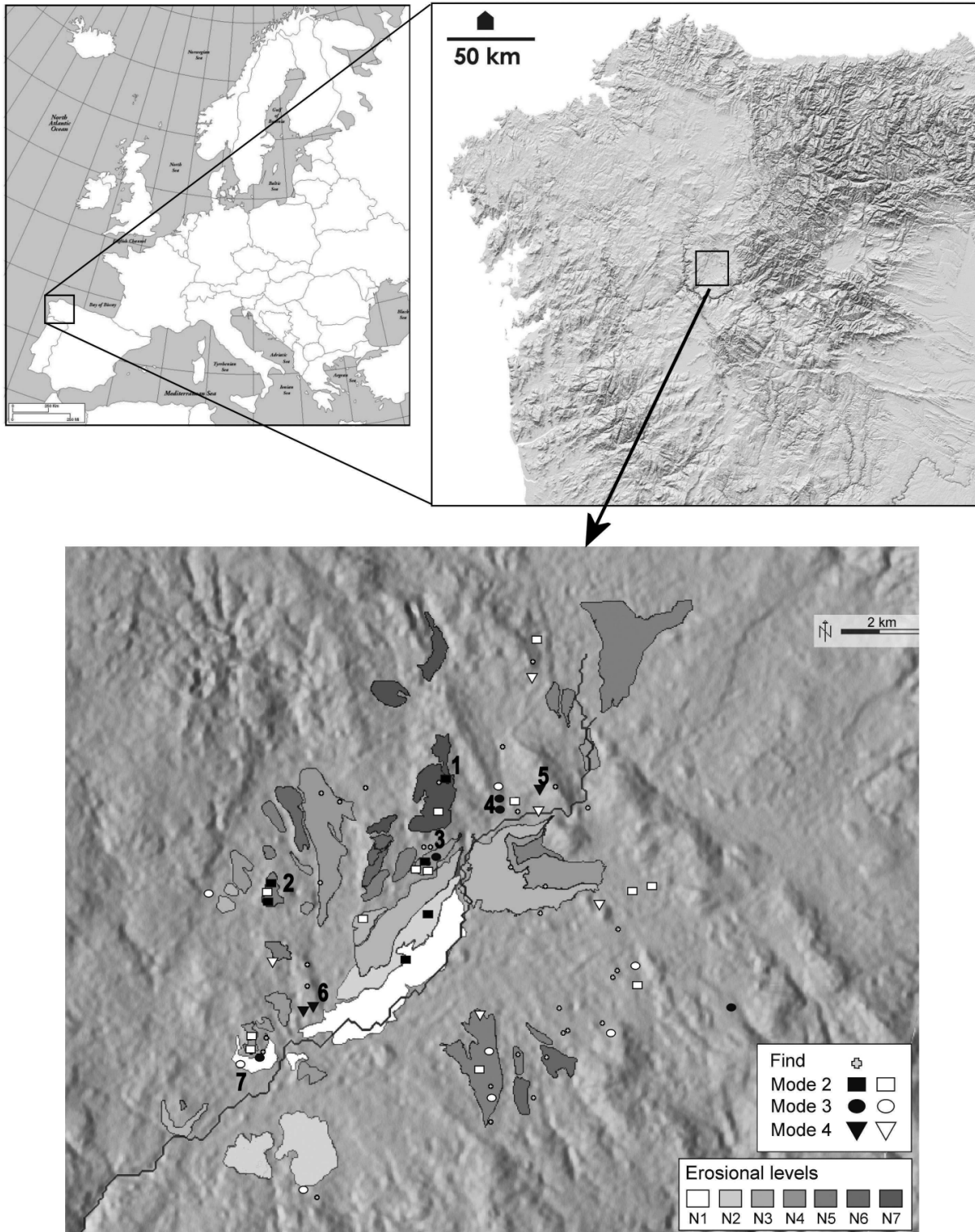


Figure 1: Location of the sites at the Monforte Basin. The squares indicate the Mode 2 findings; the circles, Mode 3 findings and the triangles, Mode 4 findings. Black indicates sites with a higher density of artefacts. The dots indicate isolated findings. The erosion levels are also specified (N1 to N7). The numbers correspond to significant sites: 1, Chao Fabeiro; 2, Chao Vilar; 3, As Lamas; 4, O Reguerial; 5, Valverde; 6, Costa Grande; 7, San Mamede.

(1-2 and 3), with 62 items (Fábregas *et al.*, 2009). As Lamas (UTM: 621.332, 4.711.619) is located in erosion level N4, where five archaeological points were discovered, which provided 241 pieces (Fig. 2.4-7). Two test pits were dug here in 2009: the test pit II revealed two archaeological levels, related to the colluviums that covered the fluvial sediments, dating by OSL in 39866 ± 3554 BP (Level 3) and 38947 ± 3150 BP (Level 2) (Fábregas *et al.*, 2010). The first level (N-II) was related to a Middle Palaeolithic occupation and the second (N-III) provided artefacts with technical characteristics and alterations (oxides), which were very similar to the pieces recovered on the surface. Its presence in a colluvium from the Upper Pleistocene should be considered the result of an episode of erosion that destroyed old sediments during the Heinrich event 4.

In these sites, the configuration strategies focus on handaxes, cleavers and trihedral picks. The majority of the handaxes are knapped on pebble and generally show a high amount of cortex on the surface. On the flake tools, the retouches create continuous and denticulate dihedral edges; sidescrapers (17.9%) and denticulate tools (13.2%) dominating over notch tools, becs and endscrapers. The most common reduction sequences are unidirectional unifacial / bifacial and centripetal, followed by the orthogonal method. The presence of the discoid method is minimum (5% of cores) and the Levallois method has only been identified in one core in Chao Vilar-II. Given the raw material used (quartzite pebbles) and its availability, the cores are knapped using natural platforms and their reduction sequences are short (60-70% of cores abandoned in initial or intermediary stages of reduction). Flakes usually show a high amount of cortex on the dorsal surface and faceted striking platforms are rare (3%).

In the Mode 2 sites, the raw material used is quartzite, followed by quartz. The presence of fluvial "neocortex" in almost all of the artefacts suggests exploitation of the secondary deposits of Quaternary age along the basin. Given that the artefact scatterings are directly on these surfaces, access to raw material was immediate and quick.

The Mode 3 sites are mainly located in erosion levels 1 and 2, particularly O Regueiral, As Gandariñas, Susao, San Mamede, Gullade and Level II of Test pit 2 of As Lamas (Fábregas *et al.*, 2007, 2009, 2010). In these site Large Cutting Tools (LCT) are almost non-existent, whereas the small lithic flake tools take on more importance. The reduction strategies are dominated by the centripetal and discoid

methods. The only archaeological records in a stratigraphic context were identified in O Regueiral and As Lamas Test pit II). In the first, located in an alluvial fan, 32 artefacts were recovered (Fig. 2.8, 2.10, 2.12), some of them in a colluvium dated by the OSL in 69446 ± 5472 BP. In the site at As Lamas (Test pit 2), Level 2 is linked to the upper colluvium but the rolling and size of the lithic tools suggest a primary context of disposition (Fábregas *et al.*, 2010). In the Mode 3 sites, centripetal and discoid cores dominate (Fig. 2.9-10), while the orthogonal or longitudinal methods are less common. Some cores and tools in fine-grained quartzite could be related to the Levallois method, as they show surface hierarchisation in the reduction. However, use of the Levallois method in Monforte is quite limited, whereas discoid products are more common, particularly those related to the final stages of small quartz core reduction (Fig. 2.9). These lithic assemblages are dominated by flakes that often show centripetal disposition of the negative scars on the dorsal surface and the presence of dihedral and faceted striking platforms (Fig. 2.11-12). The configuration sequences focus on flake tools, denticulate tools (45.5%) dominating over side scrapers (27.2%) and other tools like end scrapers and points. Some large tools, like handaxes, could be present but there are very few (Fig. 2.8). In Mode 3 sites, the use of fine-grained quartzite increases in response to the most demanding reduction methods (Levallois and discoid) and the increased standardisation of flake tools.

In the sites at Valverde, Costa Grande-III, Áspera and Pedrouzos de Mourelos, Mode 4 lithic assemblages were discovered. Unlike the Upper and Middle Palaeolithic sites, these are located in high places and not on the Quaternary surfaces. Their lithic industry stands out for the presence of blade technology and a wide range of raw materials, particularly rock crystal and flint. The most significant site is Valverde, located on a hillside 350 metres above sea level (UTM: 624.434, 4.713.497). The artefacts were made of quartz, fine-grained quartzite, rock crystal and flint (Rodríguez *et al.*, 2008). Their techno-typological characteristics (cores and laminar and micro-laminar products, and leaf-shaped points), allow it to be ascribed to the Solutrean. Along with these *chaînes opératoires* from the Upper Palaeolithic, knapped in good quality raw materials (rock crystal, fine-grain quartzite and flint), bipolar knapping and the discoid method focus on the production of quartzite and quartz implements with good cutting edges (de Lombera *et al.*, 2012).

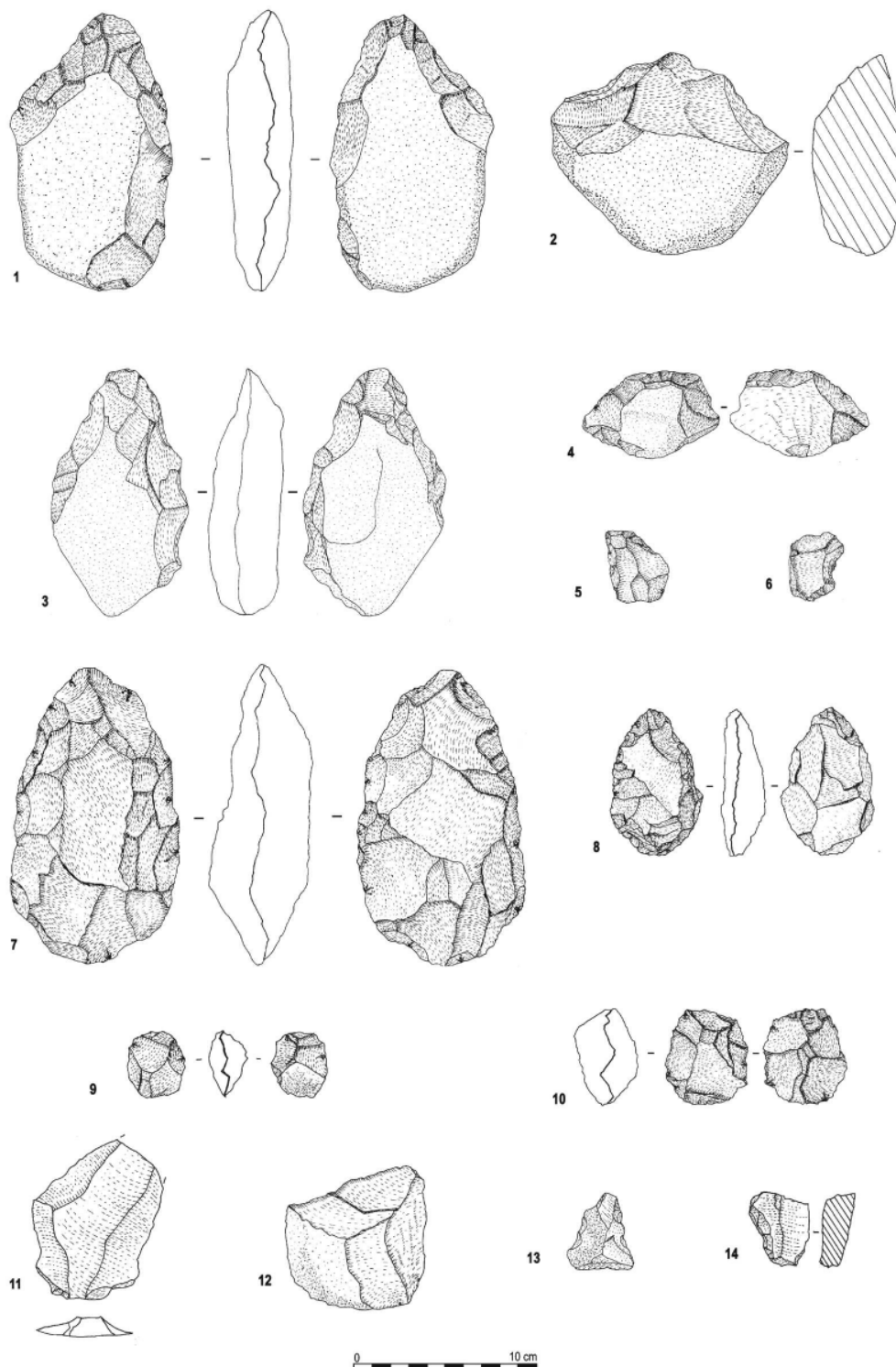


Figure 2: Lithic industry of the Monforte Basin (Mode 2 and Mode 3). 1, Quartzite handaxe (Chao Fabeiro, Mode 2); 2, Quartzite chopper Chao Fabeiro, Mode 2); 3, Quartzite handaxe (Chao Vilar, Mode 2); 4 and 5, quartzite side scrapers (As Lamas, Modo 2); 6, quartzite notch (As Lamas, Mode 2); 7, Quartzite handaxe (As Lamas, Mode 2); 8, Quartzite handaxe (O Regueiral, Mode 3); 9, quartzite disoidal core (Gullade III); 10, quartzite disoidal core (O Regueiral, Mode 3); 11 and 12, quartzite flakes (Gándara Chá and O Regueiral, Mode 3); 13 and 14, retouched quartzite flakes (Gandariñas, Mode 3).

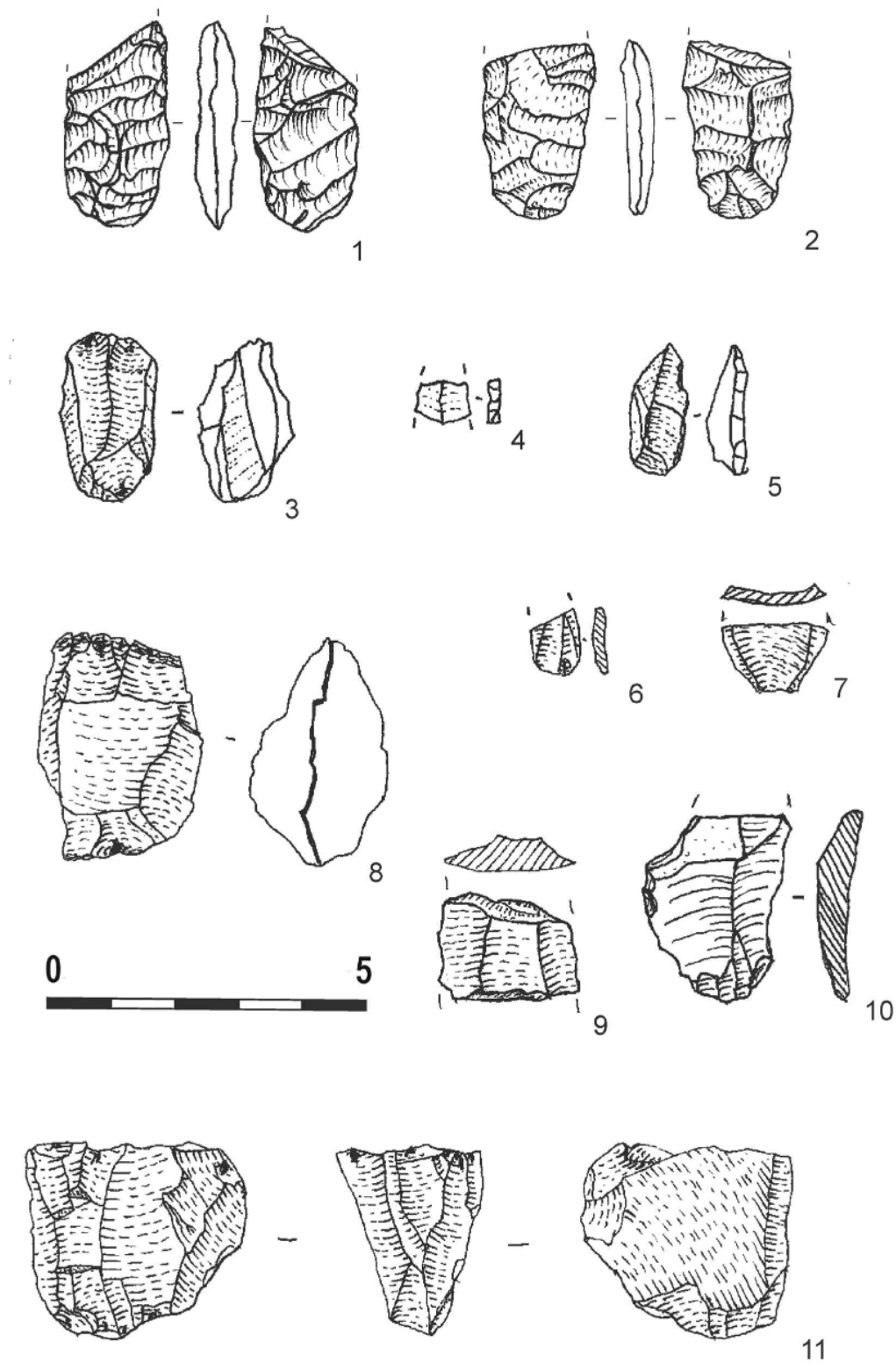


Figure 3: Lithic industry of the Monforte Basin (Mode 4). Valverde site (1-10): 1 and 2, leaf-shaped projectile fragments in flint (1) and quartzite (2); 3, micro-laminar core in rock crystal; 4 and 5, backed items in rock crystal; 6, 7 and 9: laminar and micro-laminar fragments in rock crystal (6) and quartzite (7 and 9); 8, bipolar core in quartz; 9, flint flake; 11, quartzite blade core, Áspera site.

Conclusions

The Monforte de Lemos Basin plays a strategic role due to its geographical location, as it is located in the natural route connecting inland Galicia to the western Meseta (de Lombera *et al.*, 2011). It is also framed by the two main fluvial systems of the NW of the Iberian Peninsula (the Miño and Sil) that constrain structural mobility through this territory. Secondly, due to its low altitude, the average temperatures of the valley of the Sil and the Monforte Basin during the glacial period were warmer than in the surrounding areas and comparable to those recorded on the coast. Therefore, the Monforte Basin could serve as refuge area during glacial periods, whereas the mountain and inland re-

gion, with drier and colder conditions, would be covered by icecaps and steppes. The convergence of these geological, geographical and topographical characteristics could explain the high concentration of human settlements identified during the Middle and Upper Pleistocene.

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La Cova and Valdavara 3 (Becerreá, Lugo)

The archaeological activity carried out since 2007 in the municipality of Becerreá (Lugo) has produced an extensive archaeological record corresponding to different chronocultural periods, including times almost unknown before in Galicia, such as the late Upper Pleistocene and the Middle Magdalenian. The work was carried out in two sites: La Cova de Valdavara, in which a well-preserved sequence was found, which includes levels from the Late Prehistory and late Upper Paleolithic, and Valdavara 3, another cave deposit with remains of the late Upper Pleistocene (Vaquero *et al.*, 2011).

La Cova de Valdavara and Valdavara 3 are situated in the karst located on the right bank of the river Naron (known in this area as Cruzul), one of the tributaries of the left bank of the river Navia, at 120m and 220m, respectively, above the current channel of the river. They are part of a cave system located in limestone formations called the Calizas de Vegadeo, from the Lower-Middle Cambrian,

outcropping along a wide stretch plotted NNW-SSE between the Palaeozoic formations of the Dominio del Manto de Mondoñedo, where sandy and slate rocks predominate (Vera, 2004). Some of these caves, like Cueva de Furco or Cova da Venta (Fernández Rodríguez, 1993; Grandal, 1991), were already known for having provided some isolated archaeological or paleontological remains.

La Cova de Valdavara was discovered in the 1960s by a group of amateurs from Becerreá. The archaeological excavations were carried out between 2007 and 2013, working in three sites with different sequences and deposits: Valdavara 1, which is the original cavity found in the 1960s, Valdavara 1-2, which corresponds to the outer slope and Valdavara 2, another small cavity located barely 6 m below Valdavara 1.

In Valdavara 1 a sequence of almost one-and-a-half metres deep has been documented, consisting of two main stratigraphic units (Fig. 1). The upper unit corresponds to the Late Prehistory (Vaquero *et*

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