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"The Red Lady of El Mirón". Lower Magdalenian life and death in Oldest Dryas Cantabrian Spain: an overview

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ABSTRACT

This synthesis article summarizes the multidisciplinary evidence and interpretations of the first substantial human burial of Magdalenian age to be discovered on the Iberian Peninsula. A robust, relatively tall, apparently healthy, probably female adult was buried at the rear of the living area in El Mirón Cave in the Cantabrian Cordillera of Spain about 18,700 calendar years ago. She had lived in the cold, open environment of Oldest Dryas, with a subsistence based on hunting mainly ibex and red deer, fishing salmon and some gathering of plants, including some starchy seeds and mushrooms. The technology of her group included the manufacture and use of stone tools and weapon elements made on both excellent-quality non-local flint and local non-flints, as well as antler projectile tips and bone needles. Her burial may have been marked by rock engravings suggestive of a female personage, by red ochre staining of a large block adjacent to her skeleton, and by engravings on the adjacent cave wall, and the burial layer itself was intensely stained with red ochre rich in specular hematite specially obtained from an apparently non-local source. The ochre may constitute the only demonstrable "grave offering". The grave was partially disturbed by a carnivore of wolf size after the corpse had decomposed. Then, it is hypothesized that the skeleton was covered over again and (re-) stained by humans after they (or the carnivore) had removed the cranium and most of the large long bones.

1. The Red Lady of El Mirón Cave

About 19,500 years ago a very large chunk of the limestone ceiling of El Mirón Cave crashed down atop a surface that was (or recently had been) occupied by human foragers in a period that archeologists call the Initial Magdalenian. Human life resumed in the cave, with repeated stays in the montane hinterland of what is today eastern Cantabria. During these occupations, pertaining to the Lower Magdalenian period, people made tools and weapons from both local and non-local stone materials and from antlers and bones; they hunted ibex and some chamois on the high, abrupt, rocky slopes around the cave and red deer on the broad valley floor and lower slopes of the nearby upper River Aón and its tributaries, where they also fished salmon; they built fires, pits and possibly a wall (Straus and González Morales, 2007; Nakazawa et al., 2009); they butchered carcasses, processed their products (such as hides, bone marrow and grease); they made sewn clothes and moccasins; they ate, sang, danced, told stories, reproduced, laughed, cried, slept … and they died. Only rarely were they buried in the caves where they had lived.

One of the people who died and the only one we know who was buried in El Mirón Cave (around 18,700 years ago) was an adult woman about 35–40 years old. Details of her skeleton and what can be learned directly from it, as well as the chronological, environmental, taphonomic, distributional, archeological, archeofaunal and arguably ritual contexts of her interment, are presented in the other eleven articles in this special issue of the *Journal of Archaeological Science*. Each of those articles should be read for the specialized analyses that are only very briefly summarized here. While many of the facts of the burial and its context are clear-cut, our reasoned interpretations of possible ritual activity associated with the interment are inevitably more speculative, although their

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importance to the whole story of Magdalenian human behavior in El Mirón should not be ignored.

For age-at-death estimation, the team of human paleontologists (Carretero et al., this issue) mainly relied on dental (lower P4, M14) formation stages, as well as postcranial fusion of the epiphyses. The sexual diagnosis is based on articular dimensions, mainly the acetabular vertical diameter and glenoid fossa size, plus the size of the carpals, metacarpals, tarsals, metatarsals and vertebrae. The woman was robust in build, fairly tall (ca. 159 cm; estimated weight 69 kg), and apparently healthy. Stature was estimated using regression equations derived from foot bones, as well as from estimations of the tibial length. Size comparisons with other Upper Paleolithic remains sexed as females confirm the diagnosis of the El Mirón specimen. Body mass was estimated from acetabular size. Her cause of death is unknown. The robustness of her foot phalanges suggest that she sometimes walked barefoot and/or wore soft shoes (e.g., moccasins). Her teeth are heavily worn from mastication and possibly (especially in the case of the front teeth) from paramasticatory use. Based on analyses of tooth wear calculus and on stable isotope (C and N) analyses, she had a predominantly meat-based diet, but with a substantial contribution of aquatic food (probably fish, such as salmon), and she ate some amount of plant foods, including seeds, bolete mushrooms and fungi (García-González et al. and Power et al., this issue).

2. Environment and life in the Cantabrian Lower Magdalenian

This Lower Magdalenian woman, her family and band members lived in a cold and (for this oceanic region) relatively dry environment that was largely treeless, with a combination of herbaceous/heath steppe and tundra vegetation, dotted with a few pines, junipers and the occasional birch, plus some shrubs such as sagebrush, as attested by palynology (Iriarte et al., this issue). But, as ratified by micromammal analysis (Iriarte et al., this issue; Cuenca-Bescós et al., 2009), water was locally available in the rivers, fed by ice melt from the glaciers along the crest of the Cantabrian Cordillera only a short distance from this vast-mouthed, west-facing, strategically-located cave (Straus and González Morales, 2012). Although the Last Glacial Maximum had ended and people could live a bit more "comfortably" on the northern flank of the Cordillera, conditions in the Oldest Dryas (Greenland Stadial 2) climatic phase were still rigorous, perhaps a bit attenuated in GS2b (possibly equivalent to the so-called Lascaux pollen zone).

The families who dwelled in El Mirón and who probably made the Asón Valley their core territory, maintained social relations with people living in adjacent valleys. They obtained excellent-quality Cretaceous flint from near-coastal outcrops in both central Vizcaya to the east and central Cantabria to the west (Rissetto, 2009), either by visiting those areas themselves and/or through trade with bands on whose home territories those outcrops were located. There are even traces of a distinctive flint whose source is to the south of the Cantabrian Cordillera in Treviño County within Alava Province (A. Tarriño, personal communication, July 2013). The people's most intensive contacts seem to have been concentrated within the confines of what today is the Province of Cantabria and eastern Asturias, as attested by red deer scapulae engraved with images of game animals (mainly red deer hinds) that are embellished with fine striations that give the impression of the animals' musculature. One large, nearly complete example of such an engraved scapula was abandoned in El Mirón during the Lower Magdalenian (together with fragments of others), thus linking this site with ones in both the coastal and the montane zones—including Altamira, El Castillo, El Juyo, El Pendo and El Rascaño. Similarly striated images have long been known in rock art of such caves as Altamira (González Morales et al., 2007; González Morales and Straus, 2009).

The people who occupied El Mirón during Lower Magdalenian times manufactured and used abundant lithic and osseous tools and weapons. These included many nucleiform endscrapers that were also bladelet cores, vast numbers of backed bladelets, smaller numbers of other typical Upper Paleolithic tool types made on flint (endscrapers on flakes and blades, simple burins, retouched pieces that could have been knives), as well as "archaic" types such as denticulates, notches and sidescrapers often made on local mudstone, quartzite or limestone (Straus et al., 2008; Fontes et al., this issue). The production of bladelets was especially prolific in the burial layer (Level 504) at the rear of the vestibule. Antler artifacts include many projectile points (*sagaies*) and bone needles. The *sagaies* in this period are predominantly quadrangular in cross-section and sometimes bear geometric ("tectiform") engraved decorations and longitudinal grooves for the hafting of bladelet barbs or cutting edges (González Morales and Straus, 2005). The vestibule rear behind the block was very much an area where the activities of daily living were conducted, although it would also be used for onr inhumation. In addition to hunting, butchering, manufacturing and maintenance artifacts, the Lower Magdalenian assemblages (including those of the burial layer) include marine shells, some (notably *Littorina obtusata*, *Trivia* sp. and *Antalis* sp.) perforated or sawed into beads. Two perforated caprid incisors and a perforated red deer canine were found in the burial area at the cave vestibule rear (but only one of the former was from the burial layer). However, such perforated ungulate teeth and shells (worked or not) are relatively common in all Magdalenian layers in the cave, so none of the ones from this area —so rich in "normal" faunal and artifactual "trash"— can definitely be tied to the burial as offerings (Gutierrez-Zugasti and Cuenca-Solana, this issue).

The mammalian faunal remains from Level 504 (like those from penecontemporaneous Level 17 at the front of the cave vestibule) are dominated by red deer (*Cervus elaphus*) and ibex (*Capra pyrenaica)* (MNI = 4 and 6, respectively). There are indices of hunting during winter and spring, unlike the spring–summer seasonality of Solutrean and later Magdalenian occupations of the cave. The ibex bones attest to fairly complete carcass transport to the site from presumably nearby kill locations on the surrounding steep, rocky cliffs, while there was a more selective transport of certain meaty red deer elements, presumably from the broad valley floor and lower slopes below the cave. Both juvenile and adult red deer and ibex were killed, and there are traces of horse and chamois, as well as one bone each of fox and wolf (Marín-Arroyo and Geiling, this issue).

3. The burial

The burial itself is one of the most complex features of the Magdalenian record in El Mirón. It was originally interpreted as a secondary burial because of the lack of the cranium and most long bones. Field observations during the excavations in 2010, 2011 and 2013, followed by detailed taphonomic and spatial distribution analyses (Marín-Arroyo, this issue; Geiling and Marín-Arroyo, this issue) indicate that the woman's corpse was placed in a natural depression in the 1 m-wide space between the cave wall and the big block which was deepened by leveling and digging into extant sediments of a rich Lower Magdalenian occupation layer (Level 505). The grave may have even cut slightly into underlying Level 506. The presence of the mandible and especially an upper incisor would suggest that the skull was attached to the woman's body at the time she was buried. The presence of many very small bones (including distal phalanges and sesamoids) and of representative elements of all the major skeletal regions indicates that a whole