Supplementary information

Faunal assemblages and lithic artefacts from Fuente Nueva-3 (FN-3) and Barranco León (BL) sites

The faunal assemblages of FN-3 and BL are very similar in composition (see complete faunal list in Table S1), containing numerous taxa of large mammals, micromammals and herpetofauna. Among the large mammals, both assemblages are dominated by equids and megaherbivores like *Mammuthus meridionalis*, *Hippopotamus antiquus* and *Stephanorhinus hundsheimensis* (Martínez-Navarro et al., 2010; Palmqvist et al, 2005). The main differences between the two sites are the over-representation of *M. meridionalis* in FN-3, which is almost absent in BL. *H. antiquus* in BL was considered by Palmqvist et al (2005) to be the only eudemic species at this site (i.e., the one that lived and reproduced in this swampy/lacustrine environment). The small vertebrates at both sites indicate warmer and more humid climatic conditions than today (Agustí et al., 2010), which probably favored the arrival and settlement of hominids in the basin (Agustí et al., 2009).

The lithic artefacts from both sites show many similarities. The tool assemblage from FN-3 is made of raw materials such as flint and limestone from the nearby Jurassic mountains of Sierra Umbría (Fig. 1). All the elements representing the different tool-making processes are preserved. Flint tools are altered, showing a well-developed patina. Small, non-modified flakes dominate the assemblage. In contrast, cores are less represented and retouched pieces are very scarce. Most artifacts come from the lower archaeological level, being predominantly composed of flakes and debris, as in the case of BL. However, the abundance of manuports (i.e. limestone pebbles) is remarkably higher in FN-3 (Palmqvist et al., 2005; Toro-Moyano et al., 2010). The lithic assemblage from BL is made basically of flint and includes also a small

number of quartzite flakes and limestone tools. Although some tools show evidence of transport by water and are slightly worn, many others are very fresh, showing a low degree of patination. The assemblage is dominated by non-modified, small-sized flakes and angular fragments (i.e. debris) obtained by hammerstone percussion. The retouched pieces (i.e. scrapers, denticulates and notches) are scarce, but reveal a relatively sophisticated technique (Palmqvist et al., 2005; Toro-Moyano et al., 2010). Finally, the lithic assemblages at FN-3 and BL sites are similar to other European Early Palaeolithic sites such as Monte Poggiolo, Pont-de-Lavaud and Pirro Nord, and fit within the Oldowan (i.e., Mode 1 technocomplex) variability (e.g. Arzarello et al., 2006; Carbonell and Rodriguez, 2006; Carbonell et al., 2008; Despriée et al., 2006; Lumley et al., 2009).

Additional references

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Fuente Nueva-3	Barranco León
Homo sp. (only lithic artifacts)	*Homo* sp. (only lithic artifacts)
Ursus sp.	*Ursus* sp.
Canis mosbachensis	*Canis mosbachensis*
Lycaon lycaonoides	*Lycaon lycaonoides*
Vulpes cf. *praeglacialis*	*Vulpes* cf. *praeglacialis*
Pachycrocuta brevirostris	*Pachycrocuta brevirostris*
Felidae indet.	Cf. *Homotherium* sp.
Lynx sp.	
Meles sp.	*Meles* sp.
Pannonictis cf. nestii	cf. *Pannonictis*
Mustelidae indet. (small size)	
Mammuthus meridionalis	
Stephanorhinus hundsheimensis	*Stephanorhinus hundsheimensis*
Equus altidens granatensis	*Equus altidens granatensis*
	Equus suessenbornensis
Hippopotamus antiquus	*Hippopotamus antiquus*
Bison sp	*Bison* sp
Ammotragus europaeus	
Hemitragus cf. *albus*	*Hemitragus* cf. *albus*
Praemegaceros cf. *verticornis*	*Praemegaceros* cf. *verticornis*
Metacervocerus rhenanus	*Metacervocerus rhenanus*
	Oryctolagus cf. *lacosti*
Erinacenae indet.	Erinacenae indet.
Crocidura sp.	*Crocidura* sp.
Sorex minutus	Sorex minutus
Sorex sp.	*Sorex* sp.
Galemys sp.	*Galemys* sp.
Asoriculus gibberodon	*Asoriculus gibberodon*
Allophaiomys aff. *lavocati*	*Allophaiomys* aff. *lavocati*
Allophaiomys sp.	*Allophaiomys* sp.
Mimomys savini	*Mimomys savini*
Castillomys crusafonti	*Castillomys crusafonti*
Apodemus aff. *mystacinus*	*Apodemus* aff. *mystacinus*
Hystrix sp.	*Hystrix* sp.

Table S1 : Faunal lists of Fuente Nueva-3 and Barranco León sites (from Martínez-Navarro et al., 2010).