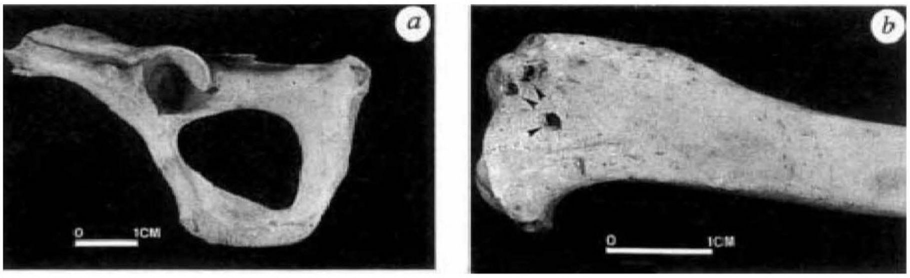

a, Left hemipelvis of Genet (*Genetta genetta.* L.), with the iliac wing fractured from the Almohad levels of Mintola (Baixo Alentejo, Portugal). *b*, Proximal portion of a left tibia from iberian hare (*Lepus granatensis*, Rosenhauer) exhibiting the punctures (arrows) caused by the main cusps of genet's upper first molar (M1).

tejo, Portugal) constitutes a remarkable find. The bone was found lying among abundant microvertebrate remains filling a cesspit contexually dated to the first quarter of the thirteenth century AD and no later than 1238, the year of the conquest of the city by the Christians (S. Macias, personal communication). The sealed nature of this deposit precludes any possiblity of the remains being intrusive. Prominent among the microvertebrate remains is the black rat (*Rattus rattus* L.), itself a subject of much archaeozoological debate and presumably one of the main reasons for the genet's putative domestication[11,12], but a more interesting find turned out to be a tibia from a hare (*Lepus granatensis* Rosenhauer) (*b* in the figure). This bone, which bears cut marks along its diaphysis indicating that it had previously been eaten by people, exhibits a series of chew marks on the proximal end, prominent among which are three on the medical side (arrows in part *b*) corresponding to the main cusps of a small carnivore's upper first molar (M^1). The protocone—metacone—paracone distances fully match the genet's M^1, rather than any mustelid of equivalent size and certainly have nothing to do with the M^1, from any cat. This all indicates that the viverrid probably got hold of the bone after it was discarded by people. (A.M., manuscript in preparation).

Although genets are not as anthropophobic as most European wild carnivores, readily venturing into poultry yards[13], one would not expect to find them in such a complex urban environment. We consider that this find has cultural connotations over and above the strictly palaeobiological.

As taphonomic and contextual evidence are circumstantial, we need unequivocal evidence to substantiate any claim of a domestication process having taken place at Mértola. The presence of the genet itself, on the other hand, offers physical proof in favour of the idea, long held by different scholars[1,3,6], that man introduced this species on Iberian soil and that this introduction was a quite recent zoogeographical event in the European subcontinent.

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Climate and the pollen record

SIR — The matter of climate instability during the last interglacial period has been brought into focus by the GRIP ice-core results from the Summit, central Greenland, showing fluctuations between colder and warmer states[1]. The validity of the last interglacial signal from the GRIP record has since been questioned by results from a duplicate core GRIP2 (refs 2, 3) and considerable further work may be necessary to evaluate the effects of ice flow on the stratigraphy of the two cores.

Broecker mentioned in passing in News and Views[4] that further doubt has been cast on the issue by the absence of evidence for large climate shifts in the northern Atlantic marine or European pollen records. But this is not the case for the European pollen record.

A brief oscillation involving double peaks in *Abies* or *Picea* interrupted by expansions of *Pinus* before the onset of stadial conditions has been observed in European pollen records of the last interglacial period at Les Echets[5,6], Grande Pile[7] and Devès plateau[8,9] in France, and Sulzberg-Baden[10] and Gondiswill[11] in Switzerland. The sensitivity of these sites relative to others that do not seem to record this oscillation has been attributed to their proximity to ecotones[6]. A temporally more extensive vegetational revertence spanning approximately one-third of the interglacial succession is recorded in continuous pollen sequences from further south (Valle di Castiglone[12], Italy; Tenaghi Philippon[13,14] and Ioannina[15], Greece. Thus, two situations can be distinguished: (1) a moderate shift in vegetation after the thermophilous components have already disappeared towards the end of the last interglacial in certain sites of central Europe; and (2) a marked revertence after the middle of the interglacial when thermophilous trees spread again in southern Europe. The timing of these two types of changes cannot be independently established in the absence of precise radiometric dating, but their occurence at different stages within the interglacial vegetation succession may point to the presence of two separate events.

Given the large physiographical, climatic and floristic variation between the different sites, we propose that such oscillations may be considerably more extensive than hitherto thought and should be viewed within the general framework of climate instability of the last interglacial. Thus, despite uncertainty over the climate mechanism(s) responsible for these oscillations and their chronostratigraphical relation to those defined within substage MIS-5e of the GRIP record, there is sufficient evidence to reject claims of absence of climate shifts in Eemian pollen records. Future high-resolution work on long continental sequences linking pollen analysis with other palaeoenvironmental studies will be able to provide further clues on the state of the last interglacial climate.

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