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Small mammals from the early Pleistocene of Sima del Elefante site, Atapuerca, Burgos, Spain, and the age of the first hominids of Western Europe

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ABSTRACT: The Sierra de Atapuerca sites in Burgos, Spain (Fig.1), are well known since they have provided the first palaeontological and archaeological record of early Pleistocene Europeans in Western Europe. These human fossil remains are well documented in the so called “Trinchera” localities, a cluster of ancient caves filled-up with cave sediments dissected and uncovered by an ancient railway trench constructed by the end of the XIX century. Amid the Trinchera localities with the fossils of the first Europeans, the Gran Dolina and the Sima del Elefante sites, we will provide a biostratigraphic sketch of the Sima del Elefante site. The locality yielded the first fossils of a *Homo* species at the level TE9 in 2007[1]. The site is a cave opening of the Galería Baja (Fig. 1) infill with 25 m of cave sediments ordered in at least 21 stratigraphic levels. The lower levels, known as the Sima del Elefante Lower Red Unit, comprise levels TE 7 to TE14. The small mammal assemblages of the levels TE 7 and TE 14 are characterized by the red-toothed shrews *Assoriculus giberodon* and *Beremendia fissidens*, the white-toothed shrew *Crocidura kornfeldi*, the talpids *Galemys* cf. *kormosi* and *Talpa* cf. *uropaea*, the erinaceid *Erinaceus* cf. *praeglacialis*; the rodents *Allophaiomys lavocati, A. burgondiae, A. nutiensis, Arvicola jacobaeus, Ungaromys nanus, Pliomys* cf. *P. simplicior, Castillomys rivas,* and *Apodemus aff. sylvaticus*. This faunal assemblage correlates levels TE 7 to TE 14with other South-European localities, pre-Jaramillo in age, like Bagur 2, Fuentenueva 3, Barranco León, Les Valerots, Le Vallonnet, Pietrafitta, or Monte Peglia[2-6].

埃勒芬特裂谷遗址(西班牙布尔戈斯省阿塔坡卡)更新世早期的小型哺乳动物和西欧早期古人类的年代

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摘要：西班牙布尔戈斯省的阿塔坡卡遗址(图1)，因发现西欧地区第一批更新世早期欧洲人的古生物学和考古学材料而举世闻名。在一个称为“特林切拉”的地方完好地保存了这些人类化石的遗骸。在特林切拉，有一系列堆积了沉积物的洞穴，这些洞穴在十九世纪后期一条铁路的挖掘过程中被发现。在特林切拉，有两个发现最早欧洲人的遗址-格兰多林(Gran Dolina)和埃勒芬特裂谷(Sima del Elefante)，我们提供了埃勒芬特裂谷遗址生物地层草图。在2007年，这个地方的TE9地位层发现了一个人类物种的第一块化石[1]。这个遗址是下加莱里亚(Galería Baja)(图1)的硐室，被填满了23米厚，包含了至少21个地位层的沉积物。被称为埃勒芬特裂谷上红层的较低的那一层，由TE7至TE14地位层构成。TE7和TE14地位层的小型哺乳动物主要是红齿鼩鼱亚科的激暴异长尾鼩*Assoriculus giberodon*和粗尾贝列门德鼩*Beremendia fissidens*，白齿鼩鼱亚科的田麝鼩*Crocidura*

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kornfeldi，鼹鼠类的小鼬鼹*Galemys* cf. *kormosi*和欧鼹*Talpa* cf. *europaea*, 刺猬类的前冰河刺猬*Erinaceus* cf. *praeglacialis*; 啮齿动物类的拉瓦异费鼠*Allophaiomys lavocati*、勃艮第异费鼠*A. burgondiae*、丰异费鼠*A. nutiensis*、雅各布烟鼠*Arvicola jacobaeus*、矮昂伽鼠*Ungaromys nanus*、简上鼠*Pliomys* cf. *simplicior*、锐瓦卡斯蒂罗鼠*Castillomys rivas*和小林姬鼠*Apodemus* aff. *sylvaticus*。在其他南欧的遗址中也有类似于TE7 至TE14地层的动物区系的集中，例如：巴固儿2、新源头3、狮子谷, 莱斯瓦隆若、勒瓦隆纳、皮查费塔、配格里山[2-6]。(陆艳 译)

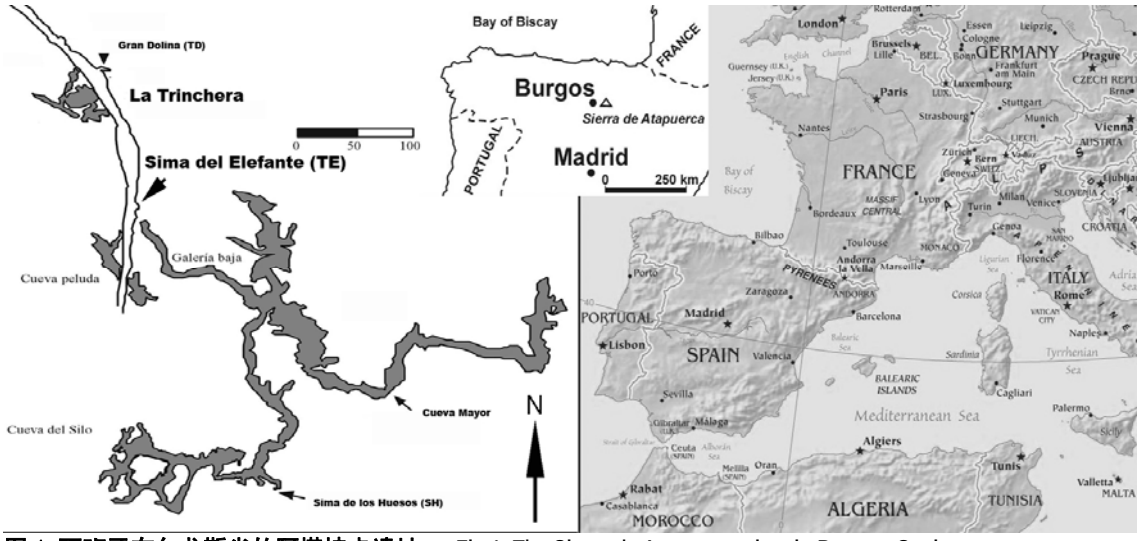

图 1 西班牙布尔戈斯省的阿塔坡卡遗址 Fig.1. The Sierra de Atapuerca sites in Burgos, Spain

References

1.Carbonell E, Bermúdez de Castro JM, Parés JM, Pérez-González A, Cuenca-Bescós G, Ollé A, Mosquera M, Huguet R, van der Made J, Rosas A, Sala R, Vallverdú J, García N, Granger DE, Martinón-Torres M, Rodríguez XP, Stock GM, Vergès JM, Allué E, Burjachs F, Cáceres I, Canals A, Benito A, Díez C, Lozano M, Mateos A, Navazo M, Rodríguez J, Rosell J, Arsuaga JL (2008) The first hominin of Europe. Nature 452: 465-470.

2.Cuenca-Bescós G, Agustí J, Lira J, Melero-Rubio M, Rofes J (2010) A new species of water vole from the early Pleistocene of Southern Europe.Acta Paleontologica Polonica 55(4): 565-580.

3.Cuenca-Bescós G, Rofes J, López-García JM, Blain HA, De Marfá RJ, Galindo-Pellicena MA, Bennásar-Serra ML, Melero-Rubio M, Arsuaga JL, Bermúdez de Castro JM, Carbonell E (2010) Biochronology of Spanish Quaternary small vertebrate faunas. Quat Int 212: 109-119.

4.Rofes J Cuenca-Bescós G (2006) First evidence of the Soricidae (Mammalia) *Asoriculus gibberodon* (Petényi, 1864) in the Pleistocene of North Iberia. Rivista Italiana di Paleontologia e Stratigrafia 112: 301-315.

5.Rofes J, Cuenca-Bescós G (2009) First record of *Beremendia fissidens* (Mammalia, Soricidae) in the Pleistocene of the Iberian Peninsula, with a review of the biostratigraphy, biogeography and palaeoecology of the species. Comptes Rendus Palevol 8: 21-37.

6.Rofes J, Cuenca-Bescós G (2010) Evolutionary history and biogeography of the genus *Crocidura* (Mammalia, Soricidae) in Europe, with emphasis on *Crocidura kornfeldi*. Mammalian Biology, in press.