



The oldest mongoose of Europe

J.A. Riquelme-Cantal^a, M.D. Simón-Vallejo^b, P. Palmqvist^{c,*}, M. Cortés-Sánchez^d

^a Dpto. de Prehistoria y Arqueología, Universidad de Granada, Campus Universitario de Cartuja, E-18071 Granada, Spain

^b Fundación Cueva de Nerja. Crta. de Maro, s/n. E-29787 Málaga, Spain

^c Área de Paleontología, Universidad de Málaga. Campus Universitario de Teatinos, E-29071 Málaga, Spain

^d Área de Prehistoria, Universidad de Córdoba. Plaza Cardenal Salazar 3, E-14071 Córdoba, Spain

ARTICLE INFO

Article history:

Received 13 March 2008

Received in revised form 20 March 2008

Accepted 21 March 2008

Keywords:

Mongoose

Introduction

Almoravid and Almohad emirates

Nerja Cave

ABSTRACT

The Egyptian mongoose, *Herpestes ichneumon*, has no Pleistocene record in Europe. Consequently, it has been suggested that this animal was introduced to the Iberian Peninsula by the Arabs, who employed it for eliminating rodents and reptiles, as in the case of the genet, *Genetta genetta*. Here we describe a subfossil mongoose skull from the Cave of Nerja, southern Spain, which has been AMS dated 885 ± 40 years BP. This specimen constitutes the oldest record of mongooses in Europe, providing evidence that these animals were introduced during historical times in the South of the Iberian Peninsula.

© 2008 Elsevier Ltd. All rights reserved.

The Egyptian mongoose, *Herpestes ichneumon*, has a wide distribution in Africa and is also present in some areas of the Levant and the south of the Iberian Peninsula, where it has a generalized diet that includes rabbits, rodents, birds, reptiles and carrion (Palomares, 1993, 2002; Zapata et al., 2007). This species is known from the Late Pleistocene and Holocene of North Africa, but is absent from the European fossil record (Kurtén, 1968; Savage and Russell, 1983; Cheylan, 1991; Dobson, 1998). Several authors have suggested that the mongoose was introduced, among other animals (e.g., the genet, *Genetta genetta*, and the dromedary, *Camelus dromedarius*), during historical times to the Iberian Peninsula by the Arabs, who used it as a domestic animal for controlling the excess of rodents and reptiles, as in the case of the genet (Morales, 1994). However, up to now no conclusive evidence has corroborated this hypothesis (Delibes, 1982).

The Cave of Nerja, southern Spain, is known for its archaeological record of the Late Upper Pleistocene and the first half of the Holocene (Simón Vallejo, 2003). However, some finds recovered in the Room of the Torca, including an Arab coin, evidence the anthropic occupation of the cave during the Middle Age (Nazari period). Also, the medieval historiography of several nearby localities (e.g., Frigiliana, Narixa and Almuñecar) is well known in a small

radius of a couple of kilometers and a Middle Age necropolis (Maro) is documented close to the cave.

During the 1959 field excavation season at the Cave of Nerja (Pellicer, 1963), several faunal remains were recovered from level 1 of the “Los Fantasma” Room. The study of the osteological collection, housed at the Archaeological Museum of Málaga, allowed identifying a nearly complete skull of *H. ichneumon* (specimen #1734, Fig. 1).

The stratum where the specimen comes from has been correlated to the advanced stages in the regional Copper Age. However, the date obtained for this skull indicates that it was incorporated to the record much later. The excellent preservation of the specimen shows that an animal went into the cavity and was trapped some 20 m from the entrance.

The AMS results (Table 1) seem to corroborate the hypothesis that the Arabs were responsible of introducing this species to the Iberian Peninsula, since the date estimated directly from a bone sample of the skull shows that it comes from an age between the XI and XIII centuries (^{14}C age BP: 885 ± 40 , Table 1), a chronology that overlaps the Almoravid and Almohad invasions of Al-Andalus.

The specimen recovered shows specific anatomical features of a mongoose, including: (1) a long and narrow skull with a well developed sagittal crest; (2) a damaged postorbital apophysis connecting with the zygomatic arch; (3) a posterior border of the palatine bone placed close to the posterior part of the zygomatic arch; and (4) a bulky posterior chamber of the auditory bullae that stands out on the skull profile. Both skull dimensions and dental measurements fall into the variability of the living Egyptian

* Corresponding author. Tel.: +34 952132002; fax: +34 952132000.

E-mail addresses: riquelme3@telefonica.net (J.A. Riquelme-Cantal), msimon@cuevanerja.com (M.D. Simón-Vallejo), ppb@uma.es (P. Palmqvist), mm.cosi@telefonica.es (M. Cortés-Sánchez).