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Recent archaeo-palaeontological findings from Barranca del Muerto site, Santiago Chazumba, Oaxaca, México

Ramón Viñas-Vallverdú ^{a, b}, Joaquín Arroyo-Cabrales ^c, Irán I. Rivera-González ^d,
Xosé Pedro Rodríguez-Álvarez ^{b, a, *}, Albert Rubio-Mora ^e, Itzel N. Eudave-Eusebio ^{a, b},
Óscar R. Solís-Torres ^{a, b}, Ciprian F. Ardelean ^f

^a IPHES, Institut Català de Paleoeologia Humana i Evolució Social, Campus Sescelades URV (Edifici W3), 43007 Tarragona, Spain

^b Area de Prehistoria, Universitat Rovira i Virgili (URV), Avinguda de Catalunya 35, 43002 Tarragona, Spain

^c Laboratorio de Arqueozoología, Subdirección de Laboratorios y Apoyo Académico, Instituto Nacional de Antropología e Historia, Moneda 16, Col. Centro, 06060 México D.F., Mexico

^d Licenciatura en Arqueología, Escuela Nacional de Antropología e Historia, Calle Zapote s/n Col. Isidro Fabela, Tlalpan, México, D. F., Mexico

^e Seminari d'Estudis i Recerques Prehistòriques (SERP), Universitat de Barcelona, Montalegre 2, 08001 Barcelona, Spain

^f Unidad Académica de Antropología, Universidad Autónoma de Zacatecas, Jardín Juárez #147, Col. Centro Histórico, 98000 Zacatecas, Zac., Mexico

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ABSTRACT

This article presents the first results of an archaeo-palaeontological study which began in 2007 at the sites of Chazumba I and II in the Barranca del Muerto, located in the Sierra Madre del Sur (Santiago Chazumba, Oaxaca, Mexico). The excavation work is part of a larger international cooperation project titled "Biodiversity and Quaternary hunter-gatherer societies from Mexico", led by the Institut de Paleoeologia Humana i Evolució Social (IPHES, Tarragona, Spain) and the Instituto Nacional de Antropología e Historia of Mexico. The main objective of the project is to study hunter-gatherer groups and their relationships with Pleistocene fauna and rock art.

To date, five excavation campaigns have been carried out (2007, 2008, 2010, 2013, 2014), which have primarily yielded faunal remains from the Late Pleistocene and from within a still undetermined period during the Rancholabrean Age (NALMA). The fauna is represented by megaherbivores (giant sloth, glyptodont and gomphothere, among others) and mesoherbivores (deer, prong-horns, horses and even small mammals, reptiles and amphibians). Some lithic materials have been recovered in association with these remains and several fossils have been examined to determine the presence of cut marks. There is an AMS 14C date of 27,720–27,500 cal BP obtained from a charcoal sample from sediments on top of the bone layers. Further sample assays are warranted in order to confirm the antiquity of the archaeological assemblage.

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1. Introduction

The origin of the peopling of the Americas remains a subject of scientific controversy. However, all research addressing the American Pleistocene aims to contribute something new to the study of the human societies that inhabited the continent and to improve our understanding of the palaeoenvironmental setting and its

various species of fauna. In this case, we focus our attention on sites in Mexico (Arroyo-Cabrales et al. 2003, 2010).

There are an increasing archaeological evidence and a growing body of genetic data on early American human populations and, although still debatable, these point to the possibility of even more ancient migrations. For example, analyses conducted at Monte Verde II (Chile) and Tlapacoya I and Cedral (Mexico) have generated dates of more than 12,500 BP (Mirambell, 1967, 1978, 2012; Lorenzo and Mirambell, 1986; Dillehay and Mañosa, 2004; Acosta Ochoa, 2007).

In 2006, residents of Santiago Chazumba inadvertently discovered 35 Pleistocene megafauna remains, which led to a site inspection by specialists from the Instituto Nacional de Antropología

* Corresponding author. IPHES, Institut Català de Paleoeologia Humana i Evolució Social, Campus Sescelades URV (Edifici W3), 43007 Tarragona, Spain.

E-mail addresses: josepedro.rodriguez@urv.cat, xprodriguez@iphes.cat (Xosé Pedro Rodríguez-Álvarez).

e Historia (INAH) in Mexico City. The bones were at the depth of a ravine known as the Barranca del Muerto, and had fallen from the middle of one of the walls of the gully. The remains belonged to a proboscidean, apparently a mammoth (*Mammuthus columbi*). INAH researchers found that the wall and the skeletal remains were at risk due to steady erosion caused by torrential rains, which were undermining the foundation of the vertical section and resulting in a landslide of the palaeontological levels. The problematic location of the deposit required an urgent and necessary excavation in order to prevent the bones from continuing to plummet to the bottom of the canyon where they were being dragged and destroyed by the current during the rainy season.

Shortly thereafter, a team of archaeologists from the Institut de Paleoecologia Humana i Evolució Social (IPHES, Tarragona, Spain) visited the site and agreed with the palaeontologists and experts

from the INAH that the systematic excavation for the recovery of the remains of the proboscidean should be included within the project “Biodiversidad y sociedades cazadoras recolectoras del Cuaternario de México”, an international cooperation research project between Mexico and Spain, comprising the states of Oaxaca, Sonora and Baja California Sur, initially funded by the Agencia Española de Cooperación Internacional (AECI).

However, what at first was intended to be a rescue excavation of the remains of a mammoth, became the discovery of a large palaeontological deposit of great interest for understanding the Late Pleistocene in this area of Mexico (Cruz et al., 2009; Arroyo-Cabrales et al., 2012a, b). The excavation, spanning an area of 30 m² at the Chazumba I site, revealed the palaeontological potential of the site starting from Level VII, located at a depth of 5 m and containing numerous fossils of different species. Associated

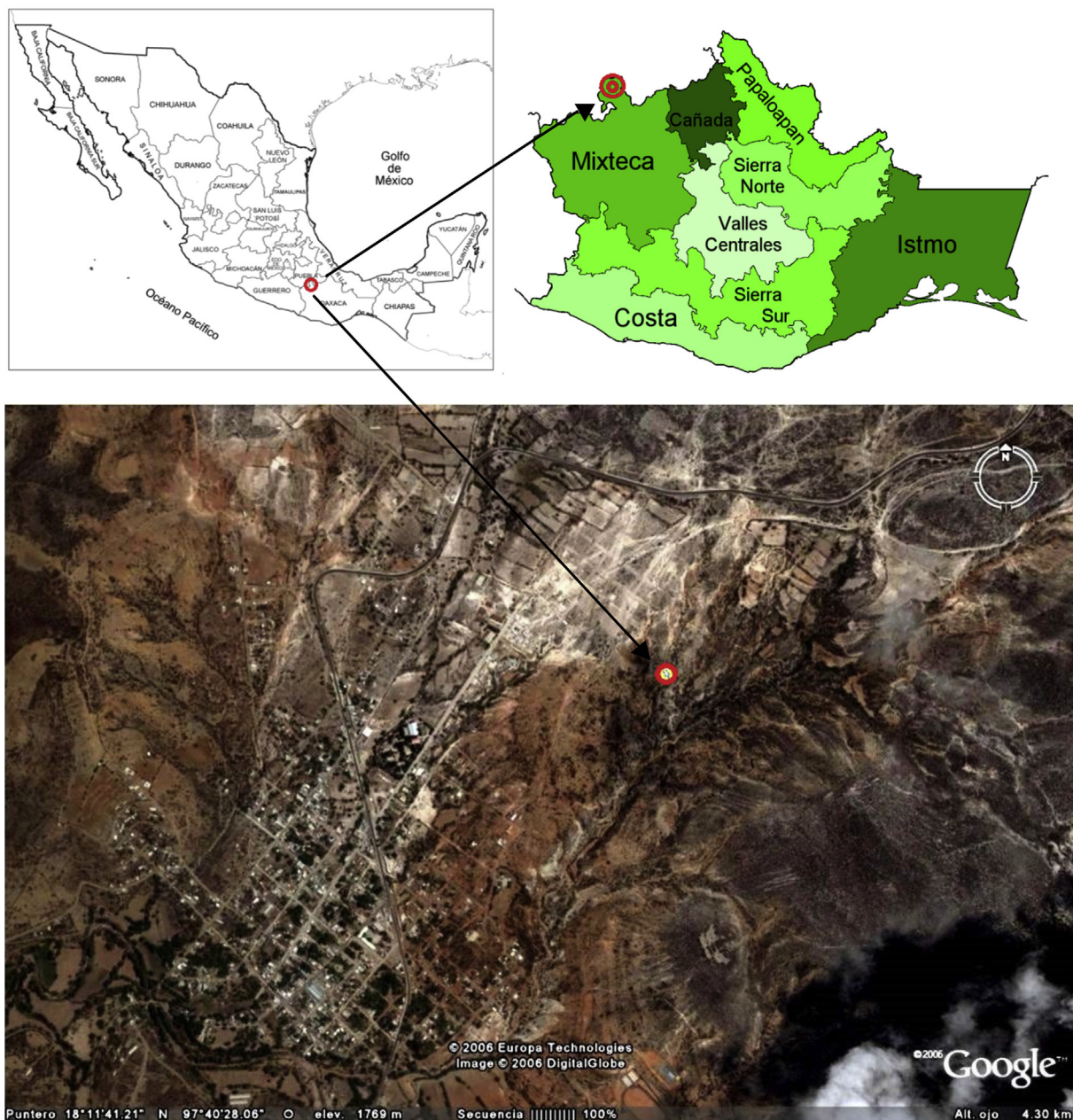


Fig. 1. Location of Barranca del Muerto site (Santiago Chazumba, Oaxaca, México).

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