

La Piquera in central Iberian Peninsula: A new key vertebrate locality for the Early Pliocene of western Europe

Pedro Piñero, David Manuel Martín-Perea, Paloma Sevilla, Jordi Agustí, Hugues-Alexandre Blain, Marc Furió and César Laplana

Acta Palaeontologica Polonica 68 (1) 2023: 23-46 doi:<https://doi.org/10.4202/app.01013.2022>

We introduce the new vertebrate site of La Piquera (Duero Basin, central Iberian Peninsula), provide a detailed description of the lithostratigraphy and present a preliminary faunal list. The fossil vertebrate association includes amphibians (with representatives of the families Salamandridae, Alytidae, Pelodytidae, and Bufonidae), squamate reptiles (with members of the families Agamidae, Lacertidae, Anguillidae, Scincidae, Blanidae, ?Erycidae, and Colubridae/Psammophiidae), and mammals (with representatives of the families Soricidae, Erinaceidae, Muridae, Cricetidae, Gerbillidae, Gliridae, Sciuridae, Vespertilionidae, Rhinolophidae, Miniopteridae, Megadermatidae, Leporidae, Prolagidae, and Bovidae). The association indicates an intermediate biostratigraphic position between the southern Iberian sites of Sifón-413 (at about 5.33–5.23 Ma) and Botardo-D (between 4.79 and 4.63 Ma), the new locality being correlated with the earliest Ruscinian (lower part of the MN14 unit). The ecological affinities of the identified small vertebrates suggest the presence of a landscape dominated by open herbaceous meadows in the surroundings of the fossil-site during the earliest Pliocene, with the occasional presence of woodland patches and stable water bodies under relatively dry and warm environmental conditions. La Piquera therefore enhances our knowledge on the vertebrate community recorded in central Iberian Peninsula during the earliest Pliocene. With more than 1200 remains, La Piquera becomes a key locality for the Early Pliocene of southwestern Europe, central Spain, where this time-span is poorly represented.

Key words: Amphibia, Reptilia, Mammalia, herpetofauna, micromammals, biochronology, palaeoecology, Duero Basin, Spain, Early Pliocene.

Pedro Piñero [ppinero@iphes.cat; ORCID: <https://orcid.org/0000-0002-5626-2777>]
and Hugues-Alexandre Blain [hablain@iphes.cat; ORCID: <https://orcid.org/0000-0002-9920-2707>], IPHES-CERCA, Institut Català de Paleoecologia Humana i Evolució Social, Zona Educacional 4, Campus Sescelades URV (Edifici W3), 43007 Tarragona, Spain; Àrea de Prehistòria, Universitat Rovira i Virgili (URV), Avinguda de Catalunya 35, 43002 Tarragona, Spain. David Manuel Martín-Perea [davidmam@ucm.es; ORCID: <https://orcid.org/0000-0002-3238-0904>], Departamento de Paleobiología, Museo Nacional de Ciencias Naturales (CSIC), José Gutiérrez Abascal 2, 28006 Madrid, Spain; Departamento de Geodinámica, Estratigrafía y

Paleontología, Facultad de Ciencias Geológicas, Universidad Complutense de Madrid, Ciudad Universitaria, 28040 Madrid, Spain; Institute of Evolution in Africa, Covarrubias 36, 28010 Madrid, Spain. Jordi Agustí [jordi.agusti@icrea.cat; ORCID: <https://orcid.org/0000-0002-7240-1992>], ICREA, Institució Catalana de Recerca i Estudis Avançats, Pg. Lluís Companys 23, 08010 Barcelona, Spain; IPHES-CERCA, Institut Català de Paleoecologia Humana i Evolució Social, Zona Educacional 4, Campus Sescelades URV (Edifici W3), 43007 Tarragona, Spain; Àrea de Prehistòria, Universitat Rovira i Virgili (URV), Avinguda de Catalunya 35, 43002 Tarragona, Spain. Paloma Sevilla [psevilla@ucm.es; ORCID: <https://orcid.org/0000-0001-7425-7173>], Departamento de Geodinámica, Estratigrafía y Paleontología, Facultad de Ciencias Geológicas, Universidad Complutense de Madrid, Ciudad Universitaria, 28040 Madrid, Spain. Marc Furió [marc.furio@uab.cat; ORCID: <https://orcid.org/0000-0002-4582-3268>], Serra Hünter fellow, Departament de Geologia, Universitat Autònoma de Barcelona, 08193, Bellaterra, Spain; Institut Català de Paleontologia Miquel Crusafont, Universitat Autònoma de Barcelona, Edifici ICTA-ICP, Carrer de les Columnes s/n, Campus de la UAB, 08193, Cerdanyola del Vallès, Barcelona, Spain. César Laplana [cesar.laplana@gmail.com; ORCID: <https://orcid.org/0000-0002-2067-4091>], MAR, Museo Arqueológico y Paleontológico de la Comunidad de Madrid, Plaza de las Bernardas s/n, 28801 Alcalá de Henares, Spain.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see creativecommons.org), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

 [Full text \(1,678.1 kB\)](#)