
The long sedimentary sequence of Valle Giumentina in Central Italy: evolution or continuity in human behaviours from MIS 14 to MIS 12?

Valentina Villa^{*1}, Christine Chaussé^{1,2}, Alison Pereira^{3,4}, Sebastian Nomade⁴, Jean-Jacques Bahain³, Nicole Limondin-Lozouet⁵, Fabio Fusco, Jean-Philippe Degeai^{6,7}, Giovanni Boschian⁸, Catherine Kuzucuoğlu⁹, Marina Pagli¹⁰, Daniele Aureli^{10,11}, and Elisa Nicoud¹²

¹Laboratoire de Géographie Physique - Environnements quaternaires et actuels (LGP) – Université Panthéon-Sorbonne, Université Paris-Est Créteil Val-de-Marne - Paris 12, Centre National de la Recherche Scientifique : UMR8591 – bat. Y 1 Place Aristide Briand 92195 MEUDON CEDEX, France

²Institut National de Recherches Archeologiques Preventives (INRAP) – Institut national de recherches archéologiques préventives – Inrap, 121 rue d'Alesia, 75014 Paris, France, France

³Muséum National d'Histoire Naturelle -Département de Préhistoire (MNHN) – Museum National d'Histoire Naturelle – 57, rue Cuvier - 75231 Paris Cedex 05, France

⁴Laboratoire des Sciences du Climat et de l'Environnement [Gif-sur-Yvette] (LSCE) – Commissariat à l'énergie atomique et aux énergies alternatives : DRF/LSCE, Centre National de la Recherche Scientifique : UMR8212 – Bât. 12, avenue de la Terrasse, F-91198 GIF-SUR-YVETTE CEDEX, France

⁵Laboratoire de géographie physique (LGP) – CNRS : UMR8591, Université Paris I - Panthéon-Sorbonne, Université Paris-Est Créteil Val-de-Marne (UPEC) – bat. Y 1 Place Aristide Briand 92195 MEUDON CEDEX, France

⁶Archéologie des Sociétés Méditerranéennes (ASM) – Centre National de la Recherche Scientifique : UMR5140, Université Paul-Valéry - Montpellier 3, Ministère de la Culture et de la Communication – Route de Mende Université Paul Valéry-Montpellier 334199 MONTPELLIER Cedex, France

⁷LabEx ARCHIMEDE – Université Paul-Valéry - Montpellier 3 – Université Paul Valéry Montpellier 3, Site Saint-Charles, Route de Mende, 34199 MONTPELLIER CEDEX 05, France

⁸Università di Pisa - Dipartimento di Biologia – Italie

⁹Laboratoire de Géographie Physique, CNRS, – Laboratoire de Géographie Physique, CNRS, 195 Meudon cedex, France – 195 Meudon cedex, France

¹⁰Archéologies et Sciences de l'Antiquité (ArScAn) – Université Panthéon-Sorbonne, Université Paris Nanterre, Ministère de la Culture et de la Communication, Centre National de la Recherche Scientifique : UMR7041 – Maison René Ginouvès Boîte 3 21, allée de l'université 92023 NANTERRE CEDEX, France

¹¹Università di Siena - U.R. Preistoria e Antropologia – Italie

¹²Culture et Environnements, Préhistoire, Antiquité, Moyen-Age (CEPAM) – CNRS : UMR7264 – Université Côte d'Azur 24, avenue des Diabes Bleus F - 06357 Nice Cedex 4, France

Résumé

*Intervenant

In the 1950s an outstanding sequence of nine archaeological layers ascribed to Acheulean, Clactonian and Levalloisian traditions has been discovered within the 70 m deep sedimentary succession of the Valle Giumentina basin in the Central Apennines (Italy). The archaeological sequence was then correlated to the Riss and Würm glaciations on the basis of the lithic industries typology. To better understand the Valle Giumentina archaeological and geological context, a multidisciplinary research project (sedimentology, geochemistry, micromorphology, malacology, palynology, geochronology and tephrochronology) including systematic archaeological excavations, funded by the École Française de Rome, was started in 2012, with the aim of studying in details this exceptional long archive combining both cultural and palaeoenvironmental information.

Sedimentological analysis and biomarkers studies indicate that the stratigraphic succession of Valle Giumentina corresponds to two complete interglacial-glacial cycles, accurately correlated with MIS 15 to MIS 12 thanks to the $^{40}\text{Ar}/^{39}\text{Ar}$ dating method. Consequently, the Valle Giumentina succession is at least 200 ka older than previously estimated, and the site must accordingly be shifted into an older phase of the European Lower Palaeolithic. This new chronostratigraphic framework allows us to precise the chronology of each archaeological level and to determine the environmental context of Palaeolithic human settlements. The site was occupied during both glacial and interglacial periods (MIS14, MIS12 and MIS 13 respectively), corresponding to a wide range of environmental contexts, from open steppe and grassland to closed forest landscapes.

Lithic studies with a technological approach are still in progress but according to their typology, every lithic series from each archaeological layers appear to be very homogeneous and don't show any major evolution. The appearance of handaxes tools in a palaeosol correlated to the beginning of MIS 12 is the only technical novelty identified in the archaeological record. Here, handaxes are associated with a core and flake industry very similar to the previous and the further ones. Our geochronological study presents a new sequence to fill the scarcity of sites between the periods of MIS 15 and 11. It allows us to bring forwards lithic studies to look at socioeconomical behaviors in this time range and possibly to their evolution which is not obvious at first glance.

Mots-Clés: Lower Palaeolithic, Central Italy, Middle Pleistocene, palaeoenvironnement, MIS 12, MIS 13, MIS 14