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Jean-Paul Raynal, Gérard Vernet

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The last eruptions of the Chaîne des Puys (France) and their impacts on prehistoric environments

by

Jean-Paul Raynal

Université de Bordeaux 1, Institut de Préhistoire et de Géologie du Quaternaire, UMR 5808 CNRS,
Avenue des Facultés, F- 33405 TALENCE, et GDR 1122 CNRS, France
et Gérard Vernet

7 rue du Mont Mouchet, 63320 Chadeleuf (France), AFAN, UMR 6042 et GDR 1122 CNRS, France

Late Glacial and Holocene volcanic activity of the Chaîne des Puys had a severe impact on the Limagne plain. An important phase of trachy-andesitic activity was followed by several trachytic volcanic eruptions. Between the Older Dryas and the Atlantic Period, at least ten major pyroclastic formations affected the plain of the Limagne d'Auvergne and they have been preserved in various depositional contexts. Their ejections contributed to the fill of the Limagne hollows and greatly disturbed the regular evolution of these. The volcanic events are useful isochronic markers that have helped construct a detailed tephrostratigraphic framework and their impact on the botanical environment has also been quantified.

Archaeological investigations demonstrate that a few Magdalenian and Mesolithic sites were directly affected by tephra falls. For example Les Roches Tephra reached Abri Durif at Enval, 30 km to the southeast of its source which was Puy de la Nugère; the Marsat syneruptive mud-flow extended 11 km from its volcano source, Puy Chopine, and covered an epipaleolithic site on the edge of the Limagne plain ; the CF7 Tephra, represented by centimetric angular fragments of trachyte noticed in several sections studied to the North-east, East and South of Clermont-Ferrand, resulted from the explosion of a trachytic dome affecting a Sauveterrian camp. Archaeologists must now determine the precise consequences of the stress on the economy of the successive prehistoric groups who were directly affected by this volcanic activity.

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