

Abri Pataud

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Sediment DNA Overview Project

Site description

Located in Les Eyzies, in the Périgord area of southwestern France, the Abri Pataud has one of the most complete cultural sequences for the earlier phases of the Upper Palaeolithic. The 1958-1964 excavations of the rock shelter by Hallam L. Movius identified 14 occupation levels in a 9 m thick stratigraphy, with large quantities of lithic artifacts, faunal remains, as well abundant traces of former fireplaces (Movius 1975; Movius 1977).

The nine lower levels **L14** to **L6** correspond to the Aurignacian, with six levels attributed to the Early Aurignacian (**L14** to **L9**) and three to the Recent Aurignacian (**L8** to **L6**) (Chiotti 2005). The Gravettian sequence (**L5** to **L2**) includes the four main stages of this period: Early Gravettian (**L5**), Middle Gravettian (**L4**), Recent Gravettian (**L3**) and Final Gravettian (**L2**) (Nespoulet 2008). At the top of the sequence, **level 1** is attributed to the Lower Solutrean.

The Final Gravettian level yielded skeletal remains of six humans (three adults [2 females and 1 male], two new-born babies and one child, 4-7 years old) in two concentrations. New excavations were carried out by R. Nespoulet and L. Chiotti between 2005 and 2015, revealing evidence for complex forms of funeral behavior in the Final Gravettian here (Nespoulet, Chiotti, and Henry-Gambier 2015).

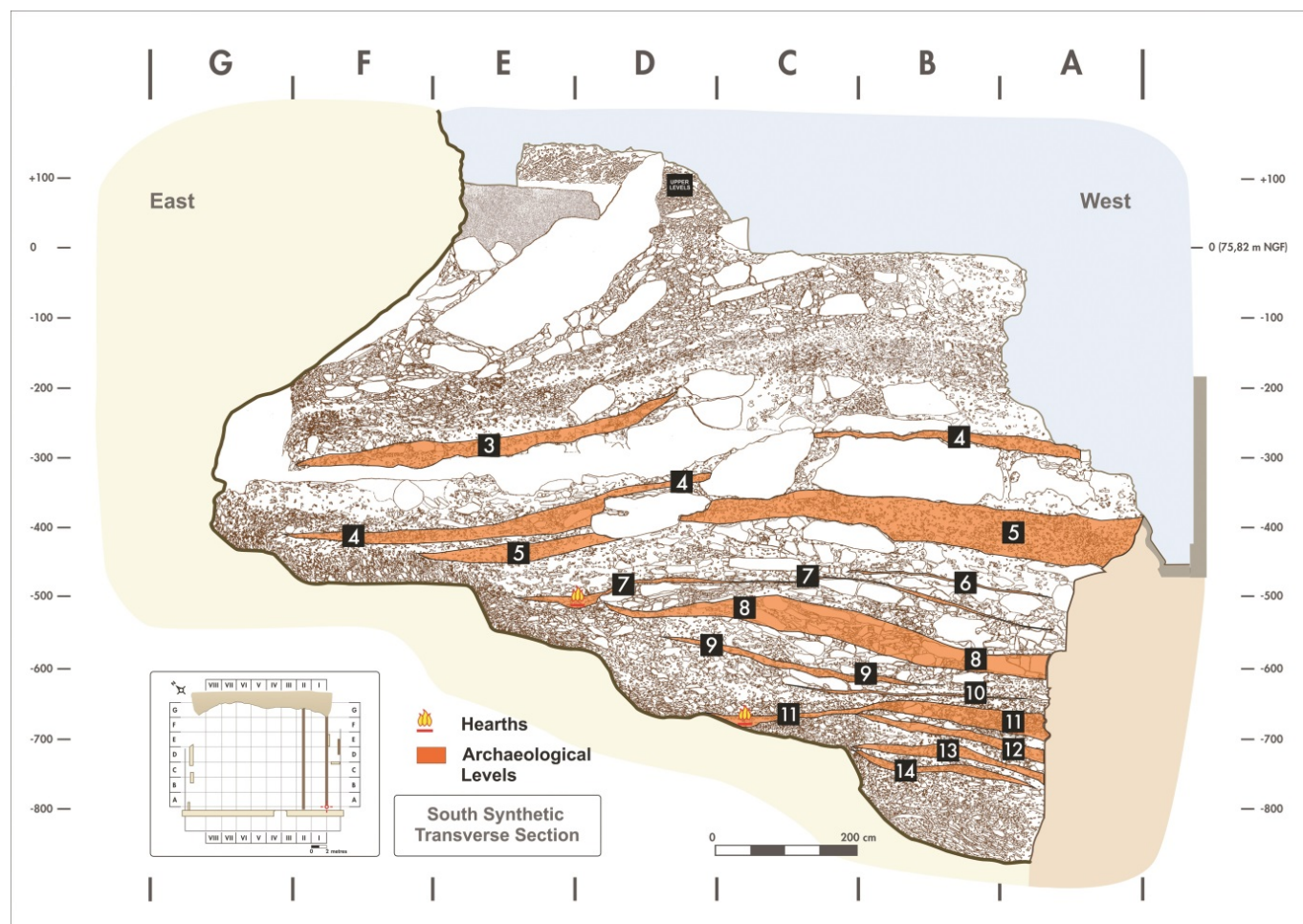
More than 120 Radiocarbon dates have been obtained since the 1960s (Higham et al. 2011; Douka et al. 2020), making the Abri Pataud one of the best dated Upper Palaeolithic sites, with an extremely coherent and fine-grained stratigraphical sequence, situated between 40,000 and 25,000 cal BP.

DNA sampling

The seven sediment samples (SP6340-SP6346) analyzed for DNA were taken during the Movius excavations in 1960-1964 and published in a recent study that used heated materials sampled from Aurignacian and Gravettian fireplaces to study the fuel type(s)

used by the site's occupants, the temperatures reached in fireplaces and the potential changes in human activities related to fireplaces over time (Braadbaart et al. 2020).

future analyses of sedimentary DNA will focus on new samples taken from the existing sections in the rockshelter.



Cross section of the excavated levels at the Abri Pataud site (drawing R. Nespoulet and L. Chiotti, graphic by Claude Lecante). Numbers in black boxes refer to Level numbers within the Abri Pataud sequence, separated by sterile layers.

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References

Braadbaart, F., F.H. Reidsma, W. Roebroeks, L. Chiotti, V. Slon, M. Meyer, I. Th  ry-Parisot, et al.. 2020. "Heating Histories and Taphonomy of Ancient Fireplaces: A Multi-proxy Case Study from the Upper Palaeolithic Sequence of Abri Pataud (les Eyzies-de-tayac, France)". *Journal of Archaeological Science: Reports* 33 (October): 102468. <https://doi.org/10.1016/j.jasrep.2020.102468>.

Chiotti, Laurent. 2005. *Les Industries Lithiques Aurignaciennes De L'abri Pataud, Dordogne, France*. British Archaeological Reports International Series. Oxford, England: BAR Publishing.

Douka, Katerina, Laurent Chiotti, Roland Nespoulet, and Thomas Higham. 2020. "A Refined Chronology for the Gravettian Sequence of Abri Pataud". *Journal of Human Evolution* 141 (April): 102730. <https://doi.org/10.1016/j.jhevol.2019.102730>.

Higham, Thomas, Roger Jacobi, Laura Basell, Christopher Bronk Ramsey, Laurent Chiotti, and Roland Nespoulet. 2011. "Precision Dating of the Palaeolithic: A New Radiocarbon Chronology for the Abri Pataud (France), a Key Aurignacian Sequence". *Journal of Human Evolution* 61 (5): 549–63. <https://doi.org/10.1016/j.jhevol.2011.06.005>.

Movius, H. L. Jr. 1975. "Excavation of the Abri Pataud, Les Eyzies (dordogne), American School of Prehistoric Research". *Peabody Museum, Harvard University, Cambridge, Massachusetts*.

Movius, H. L. Jr. 1977. "Excavation of the Abri Pataud, Les Eyzies (dordogne). Stratigraphy". *American School of Prehistoric Research. Bulletin Cambridge, Mass.*

Nespoulet, Roland. 2008. "Le Gravettien De L'abri Pataud. Bilan Et Perspectives". *Paléo*, no. 20 (December): 373–80. <https://doi.org/10.4000/paleo.1620>.

Nespoulet, Roland, Laurent Chiotti, and Dominique Henry-Gambier. 2015. "Old Collections and New Excavations in a Gravettian Key-site: The Abri Pataud (dordogne, France)". In *Forgotten Times and Spaces: New Perspectives in Paleoanthropological, Paleoetnological and Archeological Studies.*, 229–44. Masaryk university. <https://doi.org/10.5817/cz.muni.m210-7781-2015-18>.
