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# Deep pits and Schlitzgruben in the Mesolithic in the northern half of France, crossed approaches

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## Abstract

Recognize deep Mesolithic excavations (cylindrical, conical profile, etc.) on preventive archeological has been a remarkable achievement over the past ten years. These features are added to the precedently investigated U-, V-, Y-shaped pits / *Schlitzgruben* of later age (Late Mesolithic to Metal Ages) whose study benefited to these newly mesolithic excavations. Regional as national research projects published in two volumes (Achard-Corompt and Riquier 2013 and Achard-Corompt, Ghesquière and Riquier 2017) have highlighted the scale of the phenomenon.

Geographically, even if the whole country is concerned, the majority of finds come from the northern half of France, notably the Grand-Est region. Faced with features providing little if any archaeological artefact except a few archaeozoological remains and microlithic tools (flake and bladelet), scientific advances were made only with the implementation of a precise search and sampling protocol supported by hundreds of radiocarbon dates.

Thus, a typo-chronology attempt was conducted from the corpus of 280 pits excavated in Recy (Marne) in 2013 and 2014. To date, the aim of mesolithic features is still debated, opposing the trapping of wild game to the storage of collected foodstuffs (shells...). As far as *Schlitzgruben* are concerned, the former is preferred.

Several peaks in the summed radiocarbon probability curve appear to reflect periods of high pit presence and others where they are almost absent. They have developed as soon as the Holocene transition period begins. Their appearance in the Mesolithic era coincides with the return of mesothermophilic edible fruit species (acorns, hazelnuts, chestnuts) that are potentially storable in pits. In the case of traps, their development in the Mesolithic period is certainly linked to the disappearance of large game herds (reindeer, horses, bison) in favor of more dispersed temperate species (deer, wild boar, aurochs, deer) and significant changes in the hunting activities. The transition from a cylindrical/conical pit shape to a slit shape, made during the First/Second Mesolithic transition, is also probably remarkable. At this time, the number of sites is strongly decreasing and we know that it would never reach again its level obtained during the early/middle Mesolithic. Climate change, drastic demographic decline (leading to climate change?), European-wide epidemic (as part of arrhythmic model of neolithization proposed by J. Guilaine?)?

Several hypotheses can accompany this transition to the trapeze lithic industries and diggers of *Schlitzgruben*.

Discussing about these features and the related social organization of mesolithic communities

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is at the root of this communication. Their impact on the implied sedentary lifestyle of these groups is also a matter of debate. Clearly, building structures of several cubic meters used to store food reserves and/or hunting pits (visible from the camps or the site catchment areas) has strong sociological consequences; at least it signs a possible emancipation from the food survival and an evolution towards more extensive and sustainable domestic settlements.

**Keywords:** Deep pits, Schlitzgruben, Mesolithic, sedentary, hunting, storage