

Press release
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Archaeology of Notre-Dame de Paris: Progress in Research

After the fire on 15 April 2019 at Notre-Dame Cathedral de Paris, archaeologists were called in to assess the cathedral. The Emergency Law enacted on 29 July 2019 gave INRAP responsibility for preventive archaeology. INRAP teams have been working on archaeological diagnostics and excavation for the past five years, both inside and outside the cathedral, in close collaboration with the public establishment in charge of conservation and restoration of Notre-Dame de Paris (EPRND, the project owner), on assignment by the cultural arm of the French government ((Drac Île-de-France, Regional Archaeology Service). More than fifty archaeologists and specialists have been involved in 14 operations.

Excavations Inside and Outside Notre-Dame

Since 2022 and the excavations at the transept intersection before the scaffolding was constructed, many other archaeological operations have been conducted by INRAP teams, both inside and outside the cathedral. The resulting discoveries have considerably expanded our knowledge of Notre-Dame and the history of Île de la Cité. They document 2,000 years of uninterrupted history.

The oldest levels date back to the beginning of Antiquity. Our teams uncovered the floor of a residence dating from the very beginning of the 1st century at a depth of 3.50 m in the Soufflot crypt at the heart of the cathedral. From the time of the Low Roman Empire, housing and craft artefacts (burnt soil and wood) have been discovered under the square.

The excavations also identified artefacts from the Middle Ages, before the cathedral was built, including a vast Carolingian building and one or more monuments.

This research will also improve our knowledge of the cathedral's construction. For the first time, we have been able to observe the foundations: the monumental foundation that supports the towers and the foundations of the pillars, linked together by horizontal beams.

The Choir-Screen: Conservation and Studies

Built around 1230, the choir-screen at Notre-Dame was demolished at the beginning of the 18th century to accommodate new liturgical practices. Only around fifteen fragments of sculpture had previously been discovered during work by Viollet-le-Duc. In 2022, more than 1,000 fragments of sculpture were unearthed, including more than 700 elements in their original colours with additions, repairs, gold leaf and more. They represent religious figures and architectural elements. The plant decorations, faces, hair and drapery means that they can be attributed to the 13th century.

Cathedrals were painted, but in Notre-Dame almost none of the original painting remained. This exceptional discovery will make it possible to restore the choir-screen, a masterpiece of medieval Gothic sculpture.

The 13th-century painting is still vivid on these multi-coloured sculptures. There are a number of challenges involved in conservation and study of this discovery. Preservation was the first priority, because as soon as the stone was excavated, the

paint began to peel. The sculptures, buried for centuries, were suddenly subjected to different conditions. Analyses carried out in collaboration with the DRAC, LRMH and C2RMF confirmed the extreme fragility of these painted decorations. On the other hand, the stones were healthy, with little moisture and no pathogenic fungi. The emergency intervention to set the paint and clean the blocks, which began in 2024, will be completed in spring 2025. The studies began as the artefacts were stabilised. Scientists from INRAP, CNRS, LRMH, C2RMF, universities, the DRAC and EPRND are all working together on this collective research programme (PCR). The programme's goals are threefold: study every aspect of the choir-screen, design a digital recreation, assess how much of the choir-screen is still buried and publish the results of this study by the end of 2026. Promotion of this exceptional project will begin in 2024 with display of around thirty sculpted elements from the choir-screen in the ["Stones Speak: Medieval Sculptures of Notre-Dame"](#) exhibition at the Cluny Museum - Museum of the Middle Ages.

Notre-Dame, Place of Burial

Like all Catholic religious buildings, Notre-Dame de Paris is a place of burial. However, unlike other churches to which a cemetery is attached, bodies were buried exclusively inside the cathedral.

The restoration work involved digging trenches, which had an impact on the subsoil and tombs. The tombs uncovered were then carefully excavated. The bones and remains of some wooden coffins and plaster vats were removed for laboratory study. More than 100 burials have been identified and 80 of them have been excavated. The majority of the intersection of the transept, interior networks and air ducts and Soufflot crypt have revealed tombs, with the highest density in the north and south aisles of the cathedral.

In the interior networks, coffins are made of studded wood. More than 20% of these were placed in masonry plaster tanks, with the remainder in pits. Individuals were buried in shrouds, sometimes with traces of cloth or copper alloy pins. If the Church's recommendations are anything to go by, the orientation of the graves suggests that more than half would be those of lay people (heads facing west), with the other half made up of members of the clergy (heads facing east, facing the faithful).

Excavation of the Soufflot crypt also revealed burials: four bodies (two adults, a child and an adolescent), plus a smaller tomb. Radiometric dating will determine whether they predate the Gothic cathedral. In one corner, a pit contained nine aligned and stacked anthropomorphic lead coffins in a secondary position, in varying states of conservation. It is highly likely that they were transferred from the interior of Notre-Dame to this crypt during construction in the 18th or 19th centuries.

Generally speaking, graves and vats were re-used many times, and there are few overlaps between tombs. The tombs are used like vaults: they are reopened and used several times. The bones are removed and often placed on top of the new coffin.

Almost all the individuals unearthed inside Notre-Dame are adults. Most of them have age-related pathologies such as osteoarthritis, edentulism or ossification of the

cartilage, which indicates a rather elderly population. Finally, with one exception, all the skeletons are male. Unsurprisingly, these findings reflect a population expected in a cathedral: clergy or lay people from the upper classes. All of the exhumed skeletons receive an exhaustive anthropological study. In addition, radiocarbon dating, palaeogenomic analysis and isotope analysis will be conducted to reconstruct the geographic origin and mobility of the individuals.

Skeletons in the Transept Intersection: Identification

The two lead sarcophagi unearthed at the transept intersection were excavated in 2022 to the Forensic Institute of Toulouse University Hospital. While the identification of Canon Antoine de La Porte was facilitated by the epitaph on his coffin, the other deceased remained anonymous.

The UMR 5288 of the University of Toulouse III/CNRS and Professor Eric Crubézy are engaged in multi-disciplinary research, proposing a number of avenues for identification:

"The anonymous individual died of chronic tuberculous meningitis in the 16th century in his fourth decade, an age rarely represented among burials of subjects of importance in the cathedral. This unknown person, autopsied and embalmed, is intriguing because he lies in a specific area where, apart from Antoine de La Porte, no other intact tomb has been discovered. Research suggests that he may have reoccupied a grave that was home to two people who were well known in their day, but had no outstanding religious credentials. Our attention was drawn to Joachim du Bellay, a distinguished horseman and poet suffering from tuberculosis who died in 1560, after an autopsy revealed signs of chronic meningitis. Buried in the cathedral even though he was no longer a canon, his grave was not found in 1758 near that of his uncle, although the family wished him to be buried there. This situation creates a discrepancy between the approval of the chapter, which chose burial sites in Notre-Dame, and the location in the transept intersection. Two well-founded hypotheses have been suggested: a temporary burial that became permanent, or the transfer of his coffin during another burial in 1569, after the publication of his complete works."

Drac Île-de-France

In the field of preventive archaeology, the Drac studies, protects and conserves. It ensures and monitors the application of legislation and regulations on archaeological excavations and discoveries, the use of land and subsoil and the protection of archaeological remains. It plans the schedule of excavations and annual surveys in line with national recommendations, and prescribes and monitors preventive archaeology operations (diagnostics and excavations) required by spatial planning operations and carried out by various accredited bodies.

INRAP

The *Institut national de recherches archéologiques préventives* (French National Institute for Preventive Archaeological Researches) is a public body under the oversight of the Ministry of Culture and the Ministry of Research. It is responsible for detecting and studying archaeological heritage upstream of development work, and every year carries out some 1,800 archaeological diagnostics and over 200 excavations on behalf of private and public developers in mainland France and overseas. Its responsibilities include scientific analysis and interpretation of excavation data and dissemination of archaeological knowledge. Its 2,200 officials, who are spread out over 8 regional and inter-regional directorates, 42 research centres, and a headquarters in Paris, make it the largest European archaeological research operator.

Development Public body responsible for the conservation and restoration of Notre-Dame de Paris Cathedral

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