

Biography and glossary

François Daleau (1845-1927): born in Bourg-sur-Gironde, Daleau was self-taught and developed a passion for natural sciences, archaeology and anthropology at an early age. He was a member of learned societies: the Lineen Society of Bordeaux (1871) and the Archaeological Society of Bordeaux (1873), and he learned from such specialists as Jean-Baptiste Gassies, Curator for the Prehistoric Museum, Edouard Harlé, palaeontologist and Paul Broca, anthropologist. In 1872, he helped to found the French Association for Scientific Advancement. As early as 1873, with Jean-Baptiste Gassies, he excavated the Jolias cave at Marcamps, the first Magdalenian site studied in Gironde. Aurignacian: named after the Aurignac cave in Haute-Garonne. Bearded vulture: bird of prey. Cowry: seashell.

Practical information

Average length of visit: 45 minutes
Guided tours of the cave available in French.

The Centre des monuments nationaux publishes a collection of guidebooks about French monuments translated into several languages. Éditions du patrimoine publications are on sale in the bookshop-giftshop.

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Adornment and music

In addition to the engravings at Pair-non-Pair, there are other signs that humans were preoccupied by art and symbolism. We assume that the cave walls were painted, as balls of ochre and shoulder blades from cattle that had been used as palettes were found. Ochre may have also been used to paint human bodies, to cover the cave floor or to tan animal hides. Excavations revealed carved bones, cut ribs, stone and bone beads, perforated teeth, a superb pendant shaped like a cowry*, and an exceptional flute made from the bone of a bearded vulture*. However, there were very few pieces of portable art.

Sites near Pair-non-Pair

The Roc de Marcamps

This site is located next to the Moron, below the Grotte des Fées. It was explored by P. David and G. Malvesin-Fabre in 1929. Most of the artifacts that were discovered (stone and bone objects) date from the middle Magdalenian period (around 15,000 years ago). However, excavations in 1980 revealed that lower levels had been occupied during the Aurignacian* period (27,900 to 25,100 years Before Present**) with some possible traces dating back to the Châtelperronian period (35,000 to 30,000 years ago). The site was classified as a historical monument in 1934 and is State property.

The Grotte des Fées

In 1873, François Daleau* discovered this rock shelter located three hundred metres from the Pair-non-Pair cave in the same limestone valley. The stratigraphy indicates very important lithic and bone industries at a depth of 75cm in the deposits formed. The archaeological levels belong to the middle and upper Magdalenian periods. The Grotte des Fées is State property.

*Explanations overleaf.
** Carbon-14 dating which takes the year 1950 as the zero point.

Pair-non-Pair cave

An ornate prehistoric cave

Discovery by François Daleau*

On March 6, 1881, François Daleau* began excavations at the Pair-non-Pair cave, where he returned 880 times until 1913. It turned out to be one of the first pieces of evidence of prehistoric mural expression. Thanks

Page from an excavation notebook of François Daleau, museum of Aquitaine, Bordeaux



to his determination, in 1900 Pair-non-Pair became the first cave to be classified as a historical monument when it was acquired by the State. François Daleau's* work is one of the earliest examples of scientific excavation of a prehistoric cave. He used innovative methods: gradual excavation of the archaeological layers present in the cave, and notation of objects and skeletal remains in his famous excavation notebooks. The first engravings, observed as early as 1883, were identified in 1896. By matching them with archaeological levels for lithic and bone industries, François Daleau* dated them at the Aurignacian period (33,000 to 26,000 years ago).

*Explanations overleaf.

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Thanks to his methodical work, results from the excavations could be interpreted in greater depth, and Pair-non-Pair continues to be an important site for modern prehistoric and palaeontological sciences:

- Abbé Henri Breuil, André Cheynier and Michel Lenoir for the lithic industry;
- André Cheynier, Sigolène Loizeau and Marc Martinez for the bone industry and adornment;
- Edouard Harlé, E.T. Newton, François Prat and Nathalie Mémoire for wildlife;
- Abbé Breuil, André Leroi-Gourhan, Alain Roussot, Brigitte and Gilles Delluc, Christine Dubourg and Marc Martinez for mural art.

Wildlife and environment

Nearly sixty animal species were identified amongst the six thousand skeletons that were discovered. Many were carnivorous animals, such as the cave bear, wolf, fox, wolverine, skunk, panther, cave lion, and hyena, as well as the boar, reindeer, hart, megaceros, fallow deer, aurochs, bison, chamois, horse, hare and rabbit, mole and hedgehog. The rhinoceros and mammoth were also part of the environment at Pair-non-Pair where humans also hunted birds such as geese, ducks, gulls, partridges, eagles and vultures. Some were engraved on the cave walls. The most frequent carving is of the ibex, but no skeleton was found either here or at any other prehistoric site in Gironde.

The hyena often occupied the cave, but only when humans were not using it. All animal parts were used – for food, clothing, tools and adornment. The skeletons provide information about the climate and environment of the time. For 60,000 years, successive cold and temperate periods directly influenced the availability of wild game for human consumption. At the peak of the ice age, humans hunted reindeer, bison, mammoths, woolly rhinoceroses and polar foxes in a landscape characterised by taiga forests and steppes. In more temperate periods, they hunted aurochs, boar, deer, white-tailed deer and various birds that thrived on a land rich in vegetation. The most abundant skeletons found are those of the horse. Horses were hunted at various periods, as were cave bears and lions, since these animals were not as affected by climatic or environmental changes.

Lithic and bone industries: stone and bone work

Using tools made of flint, ivory and bone, François Daleau* identified four levels of human occupancy that correspond to four periods. Tools from the first two periods (Mousterian and Châtelperronian) have been attributed to Neanderthals. Tools from the next two periods (Aurignacian* and Gravettian) correspond to the arrival and settlement of Homo sapiens sapiens (Cro-Magnons).

Mousterian: 200,000 to 35,000 years ago

Mousterian industry – named after the Moustier cave, in Dordogne – was prevalent throughout Europe for more than 100,000 years. It was the predominant culture during the middle Paleolithic age, and was characterised by bifacial tools and Levallois flint knives, points and blades. The Levallois technique was used to form tools of a predefined shape by delivering a series of blows to a block of flint, or the core.

Châtelperronian: 35,000 to 30,000 years ago

This transitional culture between the middle and upper Paleolithic ages was again the work of the Neanderthals. It is characterised by rounded-back blades called Châtelperron knives (named after the Grotte des Fées in Châtelperron in the Allier). They were amongst the Aurignacian* artifacts found at Pair-non-Pair (see below), and mark the arrival of *Homo sapiens sapiens* in Europe.

Aurignacian*: 33,000 to 26,000 years ago

Aurignacian* industry includes blade scrapers, carinated endscrapers, “strangled” blades and perforators, needles, diamond-shaped spear tips, and pierced sticks made from bone or antlers. During this period, *Homo sapiens sapiens* dominated Europe and worldwide, while Neanderthals disappeared. François Daleau’s* observations of ground stratigraphy in the cave prove that engravings at Pair-non-Pair date from this period.

Gravettian: 27,000 to 19,000 years ago

This upper Paleolithic culture is named after the site at Gravette in Dordogne. This period saw the production of tips, tips with blunt, straight backs, and burins with truncated, notched blades. Gravettian humans were the last inhabitants of the cave at Pair-non-Pair.