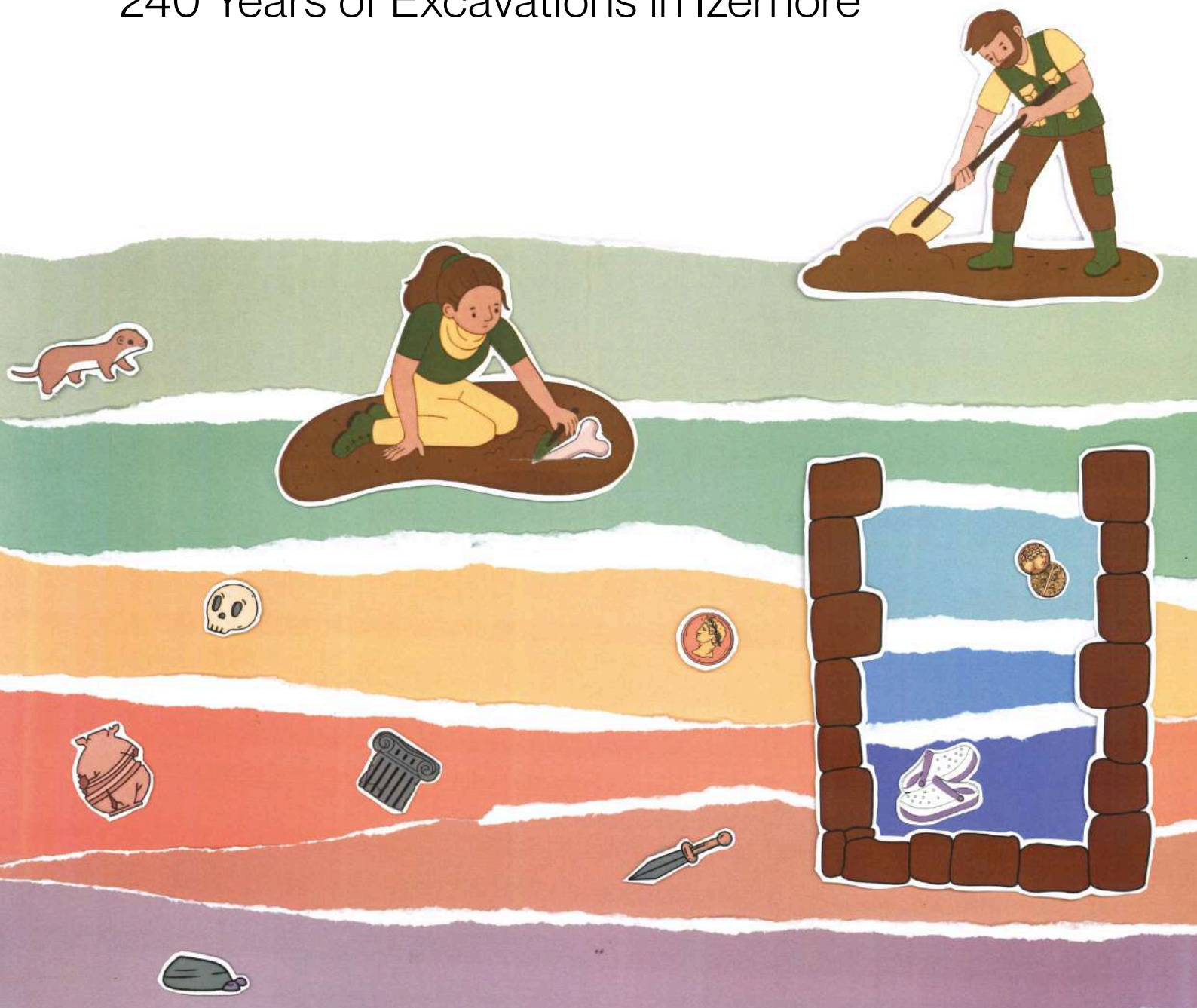
Musée Archéologique
ISARN DURUM

Deep Wells, Deep Knowledge:

240 Years of Excavations in Izernore



Temporary exhibition
from 09.11.2025 to 12.31.2027

MESSAGE FROM THE ELECTED OFFICIALS

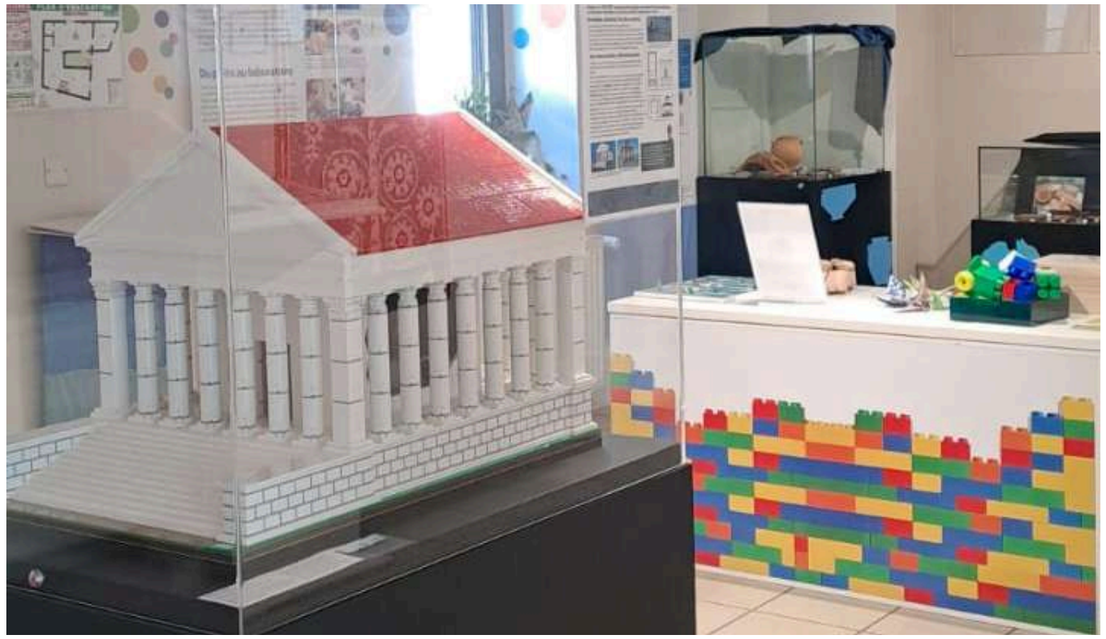
Since its creation in 1911, the Archaeological Museum of Izernore has preserved much of the material uncovered during the successive excavation campaigns carried out since 1784.

This exhibition, devoted to the research conducted up to the present day, offers a fresh perspective on the daily life of the Gallo-Roman inhabitants of Izernore.

Thanks to the initiative of Inrap (the French National Institute for Preventive Archaeological Research) and the work of the museum's team, this project has led to a new museographic display featuring previously unseen artefacts.

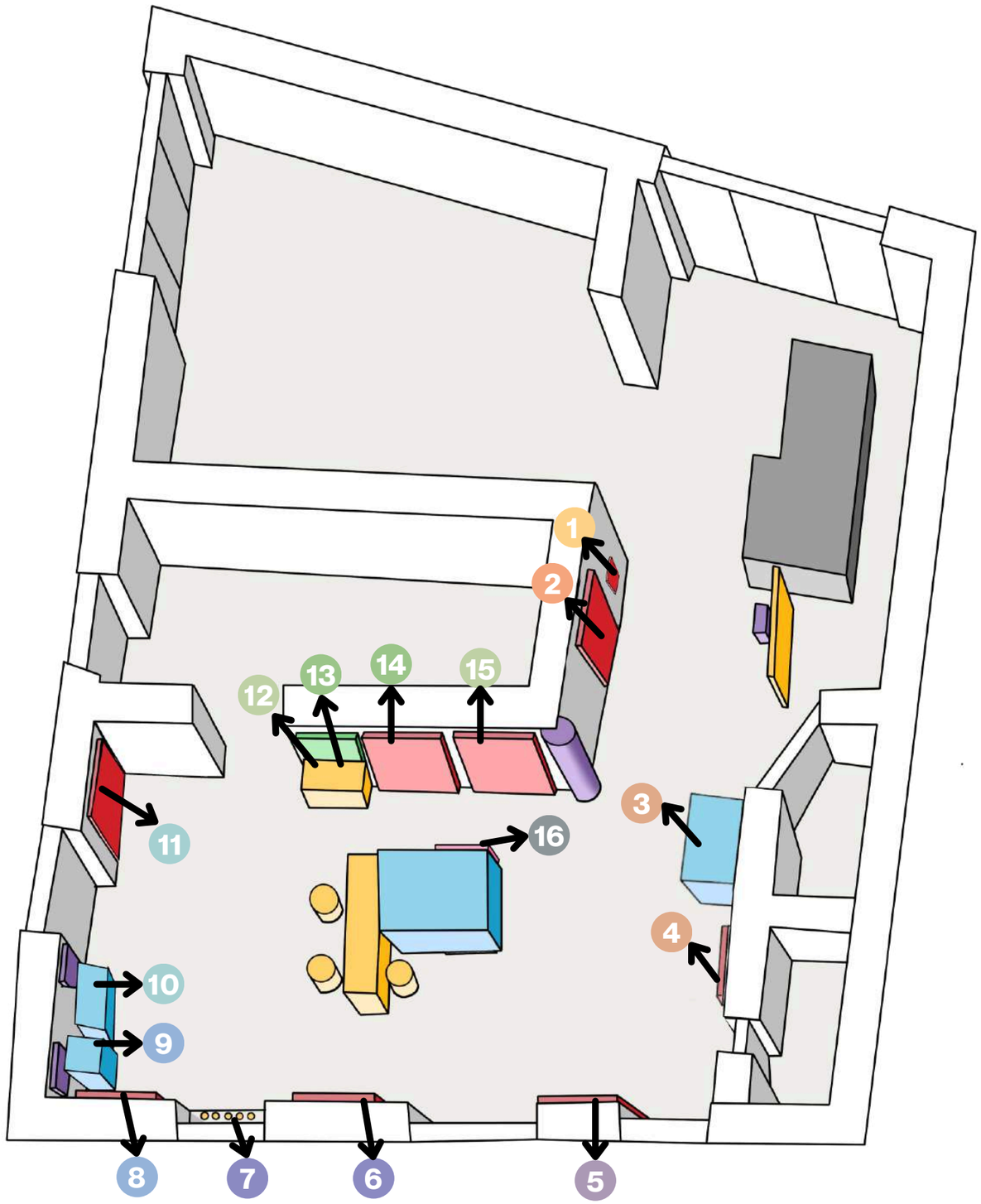
The municipal council and I are delighted to present them to you, and to open a new chapter in the history of our town.

Sylvie COMUZZI, Mayor of Izernore
Françoise DESMIDT, Deputy Mayor for Finance, Culture and Information



Exhibition view, © Musée Archéologique d'Izernore

Map of the exhibition



1 Deep Wells, Deep Knowledge: 240 Years of Excavations in Izernore

Exhibition Curation

Anne-Siegrid Adamowicz, Collections Officer
Léna Macuglia, Outreach and Education Officer

Steering Committee

Françoise Desmidt, Deputy Mayor in charge of Finance, Cultural Affairs and Communications
François Récamier, President of *Histhoiria*
Roger Gros, Former School Principal, Correspondent for *Le Progrès* newspaper

Scientific and Technical Committee

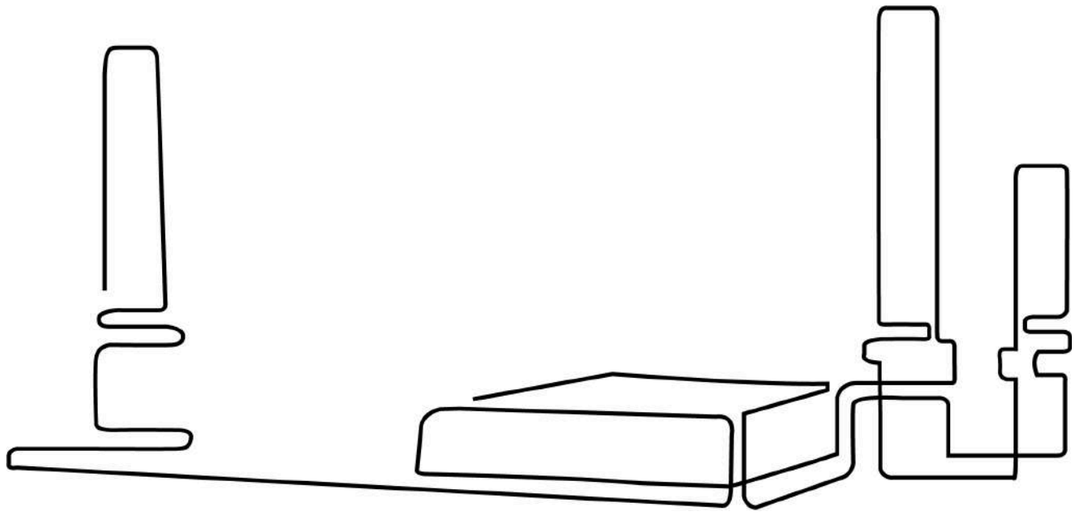
Jules Ramona, Archaeologist, Research Engineer, Territorial Officer (Ain and Northern Isère), SRA/DRAC
David Pelletier, Deputy Scientific and Technical Director, Northern Rhône-Alpes, Inrap
Emmanuel Ferber, Archaeologist, Research Engineer, Inrap
Blandine Lecomte-Schmitt, Archaeobotanist, Plant Economy and Environment Unit (Ceve), Inrap
Andréa Jusselle, Archaeologist, Research Assistant, Inrap
Ludivine Lequesne, Collections Manager for the Rhône-Alpes Region, Inrap
Christel Fraisse, Cultural Development and Communications Officer, Inrap

Technical Design and Production

Christophe Picod, Researcher and Turner, MetaJura
Fanny Lorbat, Master's Intern (Heritage and Museums), University of Western Brittany, Creator of Buxy la Stratibelette
The entire Technical Services team, especially **Christophe Bourgeois**, Head of Technical Services, and his team

Special Thanks

Sylvie Comuzzi, Mayor of Izernore, and the Municipal Team, for their trust and support
Anne Lepré, General Secretary, and all administrative staff, for her assistance and coordination
Virginie Kollmann-Caillet, Director, Museum of the Comb and Plastics, Oyonnax
Manon Cabanis, Head of the Plant Economy and Environment Unit (Ceve), INRAP, for her contributions on archaeobotanical studies
Laurence Pissard, Curator, and **Sandrine Ruinaud**, Head of Visitor Services, Museum of Footwear, Romans-sur-Isère, for the loan of elements used in the educational module on footwear through history
Marie-Jeanne Lambert, President of *MetaJura*, Honorary Curator of the Jura Museums
Patrick Trombert, Territorial Forestry Technician, National Forestry Office (ONF, five forests, Col du Berthiand and Martignat)
La Stamp (Izernore), for donating the *TamTams*
Robin Casteillo, Secondary School Intern, for his help in creating the exhibition title



Stylized drawing of Izernore's temple
© Musée Archéologique d'Izernore / Léna Macuglia

2 Deep Wells, Deep Knowledge:
240 Years of Excavations in Izernore

Archaeological excavations in Izernore began as early as 1784. They have continued up to the present day, marked by major campaigns in 1863, 1910, and during the 1960s and 1970s.
The most recent excavations, carried out by Inrap (the National Institute for Preventive Archaeological Research) on "Rue des Trablettes" between 2020 and 2022, have reshaped our understanding of the ancient town of *Isarnodurum*.

First occupation
Second half of the 1st century AD

This occupation is concentrated in the immediate vicinity of an ancient road.
A group of buildings, most likely used for domestic purposes, can be seen extending beyond the boundaries of the excavation site.
The buildings consisted of earthen **walls on posts or on a stone foundation** (a low stone wall serving as a base), combined with beaten earth floors. Numerous traces of heat have been detected, indicating a very likely fire. Two wells were in use during this occupation. To the south-east, a pit could be a cremation deposit.

These campaigns were ordered by the State (DRAC Auvergne-Rhône-Alpes) following positive findings.
These two excavations, carried out on adjacent plots, revealed the almost complete layout of a group of ancient buildings and various associated structures.

Second occupation
2nd and 3rd centuries AD

The occupation extends significantly to the west, with several redevelopments of the space.
There is a series of buildings constructed with earth walls resting on **low masonry walls**.
To the south, rows of post holes suggest the construction of an enclosure.
Two new wells are located in the inner courtyards and two others are outside.

There are also eight pits, some of which may have been used as latrines or cesspits, while others may have been used for storage.
The archaeological objects unearthed are mainly associated with domestic life and crafts, particularly smithing. The wooden objects found in the wells reveal, among other things, the presence of another craft: woodturning.

The animal bone remains found indicate butchery and even livestock farming activities.
The final stages of the building restoration suggest the presence of a granary.

1 - Excavation underway at a well in Izernore, © Inrap

The excavation did not reveal any evidence of particular occupation on the plot between the 4th and 18th centuries. The land was probably used for agriculture at that time. Traces of cattle farming dating from the 18th century confirm the agricultural use of the plot and are probably linked to a farmhouse that was still present on the site.

2 - The anaerobic environment (with the continuous presence of water and the absence of light and oxygen) of the wells has allowed wooden objects to be preserved, such as this maple shoe sole, © Inrap

3 A century-old museum
Mythical objects and archives

The museum took on a professional dimension in the 2000s, driven by the 2002 Musée de France law, obtaining its label in 2003.
In 2004, a complete overhaul of the museum was carried out in the four rooms on the upper floor.
The six objects in this display case take you on a journey through the history of the various excavation campaigns and the creation of the museum's collections, from the first discoveries to recent acquisitions.

1 - Slab with sundial

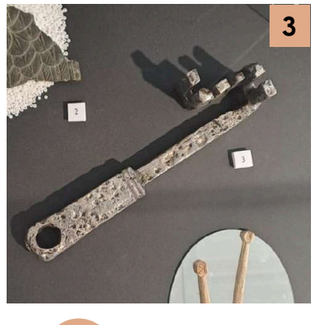
Limestone. 1st–3rd century. Izernore: temple, at the foot of the south-east pillar (1785). Inv. no.: 1986 (Izernore Archaeology Museum Collection, MH*).

This incomplete sundial is inscribed in a square, in which Roman numerals are engraved. It was discovered by chance at the end of the 18th century. It was then retouched and reused in a building in Bussy.

2 - Fragment of a statue's wing

Bronze. 1st–3rd century. Izernore: at Clésiat (19th century). Inv. no.: 668 (Izernore Archaeology Museum Collection).

This fragment of a statue's wing was discovered by chance during the 19th century. It belonged to a statue.



3 - Key known as the 'temple key'

Iron. 1st–3rd century. Izernore: west of the temple (1863). Inv. no.: 456 (Izernore Archaeology Museum Collection, MH*).

This key was discovered during excavations in 1863. Due to its size and the location of its discovery, it has been interpreted in the past as the key to the temple.

*listed as a "historic monument" (MH - Monument Historique"

4 - Hairpins

Bone. 2nd–3rd century. Izernore: Pérignat (1910). Inv. no.: 788 and 800 (Izernore Archaeology Museum Collection, MH*).

These hairpins were used to hold Roman women's sometimes complex hairstyles in place. They were discovered in one of the ancient villas located in the countryside and hamlets around Izernore.

5 - Kettle

Ceramic. 1st–3rd century. Izernore: municipal housing development (1970). Inv. no.: DTEMP.1996 (SRA deposit).

During excavations in the 1960s and 1970s, several wells and pits were uncovered. Numerous ceramics were discovered in these.

6 - Coins

For the collection as a whole: Michaillard Collection - Acquired in 2021 (Izernore Archaeology Museum Collection).

6a - **Arverni quarter stater** - Gold. 2nd century BC. Inv. no.: 2021.1.1

6b - **Sequane potin** - Potin (copper alloy). La Tène D2, 80-30 BC. Inv. no.: 2021.1.4

6c - **Denarius of Antoninus Pius** - Silver. 147-148. Inv. no.: 2021.1.22

6d - **Sesterce of Antoninus Pius** - Silver. 150-156. Inv. no.: 2021.1.24

6e - **Antoninianus of Gallienus** - Silver/billium. 267-268. Inv. no.: 2021.1.41

6f and 6g - **Antoninianus of Claudius II Gothicus** - Silver/billona. 269. Inv. no.: 2021.1.46 and 2021.1.55

In addition to discoveries made during excavations, the museum enriches its collections through acquisitions, donations, etc.

4 Izernore: 240 years of excavations, a century-old museum

The Gallo-Roman temple of Izernore has long attracted walkers, visitors and scientists. Since the 17th century, scholars have been keen to describe these ancient remains, some of which were incorporated into the museum during the 20th century.

A temple that draws attention

• **1650**: Samuel Guichenon describes "three marble columns standing upright, two of which are 35 feet high".

• **1784 to 1822**: The "Société d'émulation de l'Ain" finances the first excavations, which focus on the temple: frescoes are discovered and the presence of a staircase on the façade is confirmed by Thomas Riboud, then president of the Société.

• **1863**: The first large-scale campaign, which, among other things, uncovered the thermal baths. Jules Baux, archivist, wrote the excavation report and Etienne-Jospeh Carrier, road inspector, drew up precise plans of the remains.

• **1910**: Work resumes under the leadership of Émile Chanel, who restores the temple's cella.

• **1960s and 1970s**: The Touring Club de France, under the direction of Raymond Chevallier and Claude Lemaître, carries out various operations in connection with the expansion of the city's housing stock.

• **2000s to present day**: Preventive excavations are carried out during construction work. This was the case, for example, in 2013, prior to the restoration of the temple, and in 2019 and 2022, prior to property development projects.

The 1863 excavation campaign was motivated by the search for a site emblematic of the Gallic Wars: Alesia. Izernore was one of the candidate towns for the location of the battle, but this hypothesis has now been disproved.

1 - Photograph of an excavation team from 1968, © Izernore Archaeological Museum

2 - Atmospheric photograph of the 1968 campaign, © Izernore Archaeological Museum

3 - Family washing archaeological artefacts, 1960s-1970s, © Izernore Archaeological Museum

From excavation site to certified museum

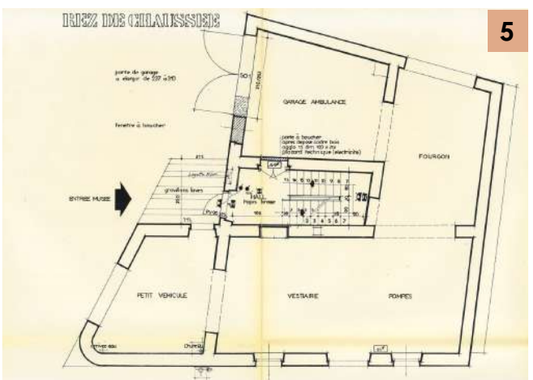
• **17 September 1911**: The museum is inaugurated in the presence of Maurice Barrès, Member of Parliament for Paris and member of the Académie Française, the mayor, Auguste Cheney, and his municipal council . The four display cases occupy a room on the ground floor of the town hall for a long time.

• **1939-1945**: The museum was not spared from looting: bronze statuette of Secullus, enamelled zoomorphic fibulae, intaglios, etc.

• **1966**: The museum was transferred to a disused classroom. The opening of a fifth room in 1976 meant that the museum was 'boxed up' and stored in the presbytery and the basement of the town hall.

• **4 July 1987**: The museum moved permanently to the "Maison Poizat", named after its owner, a butcher in Saint-Martin-du-Fresne (a nearby town). This building was formerly a first-aid centre, then a hairdresser's on the ground floor and meeting rooms on the first floor.

4 - Raymond Chevallier inaugurates the museum's new exhibition on 17 July 1966, © Izernore Archaeological Museum



5 - Rescue centre's map, © Izernore Town Hall

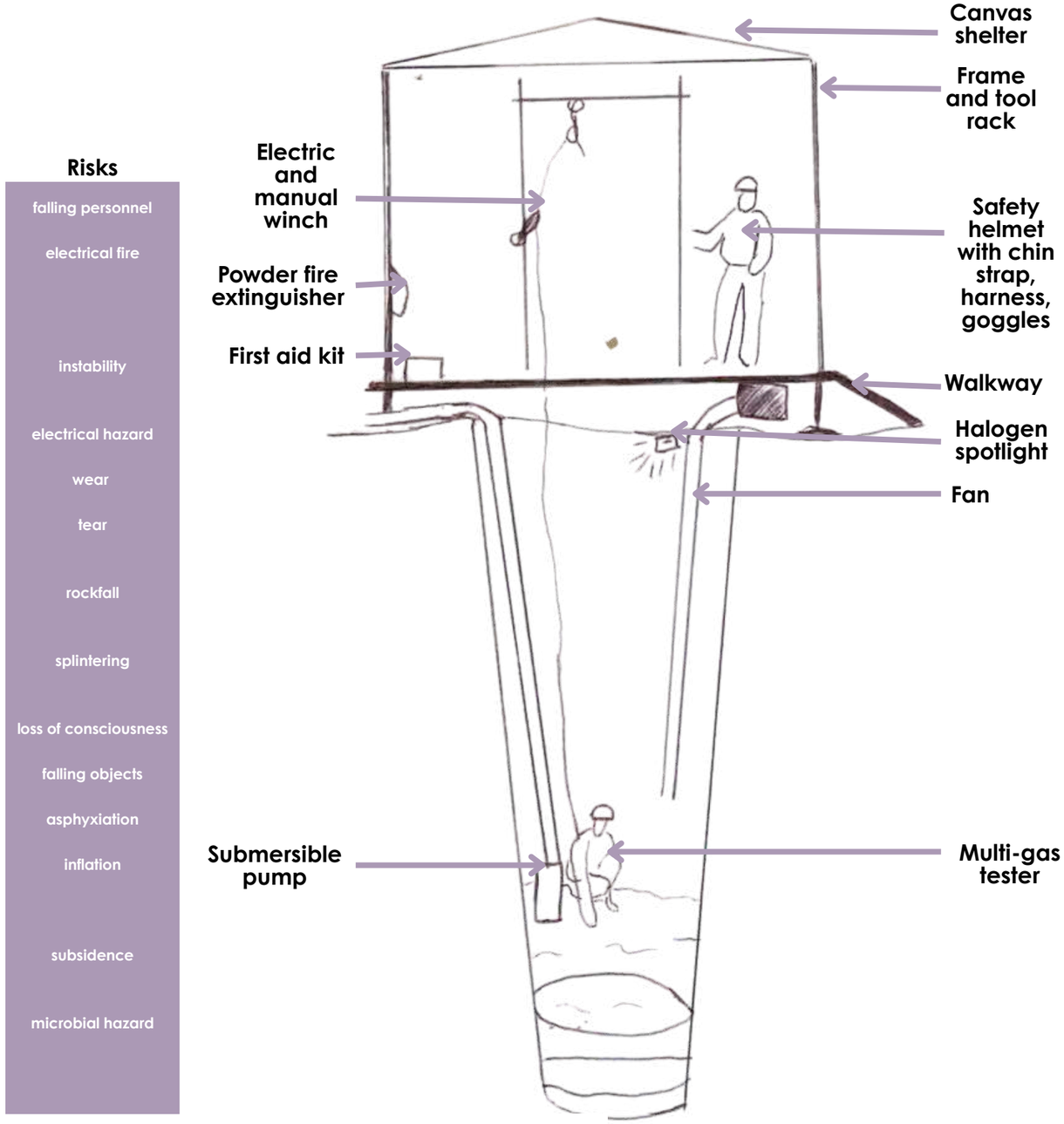
5 Exploring the Depths: Archaeological Investigation of Wells

The study of ancient wells opens up new avenues for archaeological research and deepens our understanding of the sites under excavation.
To pursue this line of inquiry, Inrap has created a specialized unit dedicated to the exploration of deep archaeological structures — the Cisap (Specialized Unit for the Study of Deep Archaeological Features).

An Innovative and Safe Method

A specially designed work platform, equipped with safety systems adapted to deep archaeological structures, allows wells to be excavated safely by hand.
Each operation is carried out by a two-person team — one supervisor and one field archaeologist working below ground. The process includes the archaeologists' descent and the removal of excavated soil, the stabilization of the shaft or masonry, air-quality control, and water drainage.
Every stage follows strict safety procedures and complies fully with current regulations.

1 - CISAP intervention in Izernore, © Inrap



Simplified drawing showing the individual and collective protective equipment used to prevent risks during the excavation of deep archaeological structures (wells, shafts, mines, etc.), from © Frédérique Robin, Frédéric Guériel, Christophe Tardy, INRAP

6 The ancient environment revealed by archaeobotanical studies

In the water at the bottom of the ancient wells of Izernore, preserved from light and deprived of oxygen, numerous organic remains have been found. Pollen, seeds and wood reveal the landscape, customs and activities of this ancient neighbourhood.

The study of woods

There was vegetation along the banks of the Oignin and Anconnans rivers, consisting mainly of willows, elderberries, ash trees, alders, birches, buckthorns, viburnums and clematis.

A mixed mountain forest, dominated by beech and fir trees combined with spruce, is located near the site today. There are also oak and boxwood trees in the undergrowth. All the wooden elements identified in the wells appear to be of local origin, with the exception of walnut and cabbage, which were deliberately introduced.

After study, the wooden furniture was treated for stabilisation by ARC-NucléART, a workshop laboratory in Grenoble.
A reversible process was used to replace the water saturating the wood of the furniture with a resin, solidifying the object and enabling its conservation.


1a - Buckthorns, © Banana patrol, Wikimedia Commons


1b - Viburnums, © James St. John, Wikimedia Commons


1c - Clematis, © Epibase, Wikimedia Commons

From the well to the laboratory


2 - Blandine Lecomte-Schmitt, xylologist, studies one of the wooden wall lights at the Inrap archaeological research centre in Bron (Rhône), © Flore Giraud, Inrap


3 - The 503 wooden items discovered are divided into 26 taxa of trees and shrubs, identified through microscopic analysis of wood tissue, © Flore Giraud, Inrap

Once removed from the pits, the wooden furniture was studied by Blandine Lecomte-Schmitt, a xylologist. This specialist studies every stage in the history of the wood: from the life of the tree to the management of its felling, its successive transformations to the way the objects were used, including traceology (the study of tool marks), analysis of their wear and tear, and even the reasons why they were buried or preserved.

From the well to the laboratory

Excavations at Izernore have revealed **cereals** preserved by imbibition (the process of being soaked in water), including naked wheat, which could be used to make bread.
Millet has also been identified.
The wells yielded **fruits that had been acclimatised** since Roman times, such as plums, peaches, grapes and cherries, as well as wild fruits: hazelnuts, elderberries and sloes.


4 - The seeds are sorted, identified and studied by a specialist, a carpologist. For these excavations, this is Manon Cabanis, Inrap, © Hervé Lequeux, Inrap.

The **vegetables and herbs** found include lamb's quarters, purslane and chicory, eaten as young shoots, as well as spices commonly used in Roman cuisine such as dill, coriander and celery.

Medicinal plants such as opium poppy and hemp have also been found.

Wild plants bear witness to a landscape dominated by fallow land and crops.

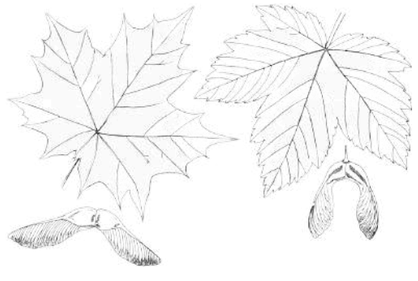
7 Knock on wood!
Species of yesterday and today

These various logs were kindly donated to us by the Office National des Forêts (ONF). They offer a glimpse of the diversity of the forest cover in Izernore during ancient times. Nowadays, with climate change, certain endemic species are dying out in favour of other varieties, sometimes less local.

1 - Boxwood

Buxus sempervirens.

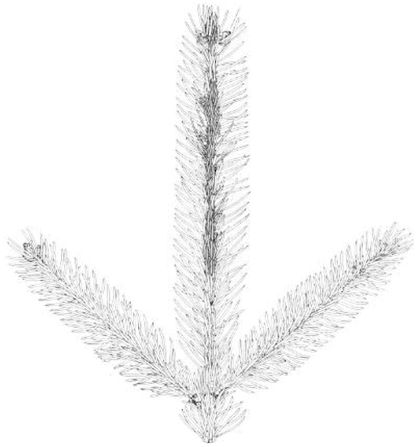
This tree can grow up to 5 metres tall and live between 100 and 600 years. It produces dense wood with a very fine grain, which takes on a beautiful polish. The plant itself is ornamental, particularly for topiary. This species has been used in particular to make combs.



2 - Norway maple or sycamore maple

Acer platanoides / pseudoplatanus.

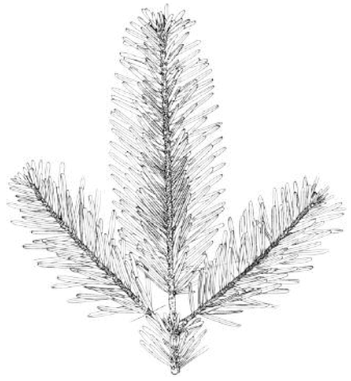
This family of trees can grow up to 50 metres tall and live between 200 and 500 years, depending on the species. It is a very melliferous plant: it attracts bees. This species has been used to make the soles of children's shoes.



3 - Spruce

Picea abies.

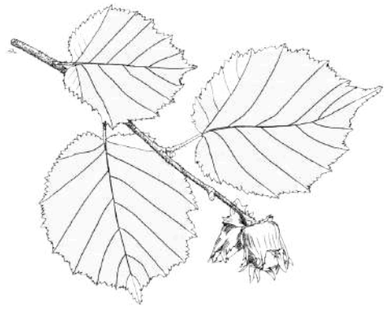
This tree can also grow up to 50 m tall and live up to 300 years. It is very resistant to cold weather.
Young specimens are often used as Christmas trees.
This species was used to make the shelves.



4 - Silver fir

Abies alba.

This tree can also grow up to 50 m tall and live between 200 and 300 years. It produces high-quality white wood that is highly sought after. This species was used to make the tablets.



5 - Hazel tree

Corylus avellana.

This shrub can grow up to 4 m tall and has a short lifespan of 20 to 30 years. It is best known for its edible fruits, hazelnuts. It also produces a flexible and soft wood, which is a good fuel. This species has been used in particular in basketry.

Drawings of tree species taken from the illustrations in *Flore forestière française, Volume 2: Montagnes, Guide écologique illustré*, Jean-Claude Rameau, Dominique Mansion, Gérard Dumé, collection: Flores forestières françaises, 1999.

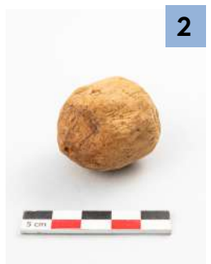
8 A boxwood craft workshop

The wooden elements of the wells at Izernore bear witness not only to the exploitation of the surrounding woods, but also to a professional craft linked to the production of objects made and turned from boxwood, with the probable presence of a workshop.

The manufacturing stages

Boxwood is chosen for its hardness, strength and very fine grain, which is smooth and soft to the touch, allowing the creation of delicate and resistant pieces such as the very fine teeth of a comb. Its beautifully grained, splinter-free wood is also chosen for making handles and decorative elements.

1 - Cutting waste, work scrap, © Flore Giraud, Inrap



2 - Turning scrap, © Flore Giraud, Inrap

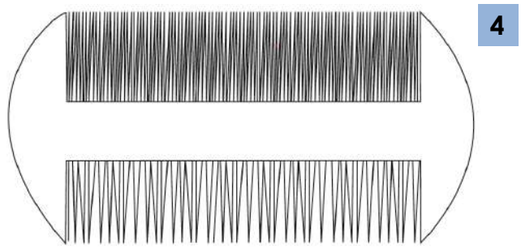
3 - Rough drafts or waste from double-toothed combs, © Flore Giraud, Inrap

Cutting scraps 1 and turning scraps 2, trimming waste and rough-cutting 3, finished objects, confirm the presence of a boxwood workshop in this Roman district of Izernore.
Bussy, one of the seven hamlets of Izernore, probably takes its name from boxwood: *Buxus sempervirens*.

Manufactured objects

This workshop produced shaped objects such as combs 4 and turned objects such as spindle whorls 5, appliqués 6 or even pyxides 8 and 9.

The location of the workshop, close to the raw material source, allows the wood to be worked when it is green and softer. Similar boxwood objects have been discovered throughout the Roman world. They were widely traded, like writing tablets.



4 - Drawing of a double-toothed comb, © Sarah Fauvel, Inrap

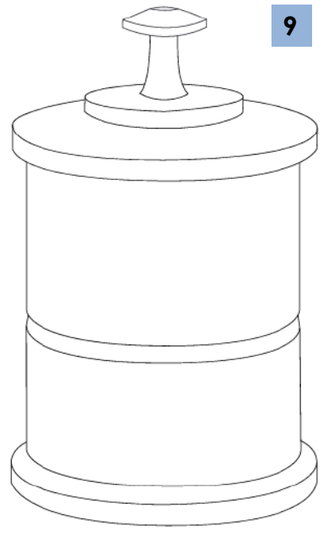
5 - Whorls are weights attached to spindles to facilitate spinning (of wool, for example), © Flore Giraud, Inrap

6 - Decorative appliqués, © Flore Giraud, Inrap

7 - Polisher, © Flore Giraud, Inrap

8 - Fragments of a pyxis (small box whose name derives from *buxus*, boxwood), © Flore Giraud, Inrap

This comb craftsmanship has a heritage that continues to this day in the Plastics Valley. In Oyonnax, combs were long made from boxwood, then horn, from 1826 onwards, before the use of celluloid by most industries around 1886. The first celluloid production factory,
L'Oyonnaxienne, was established in 1900. Then, from 1936 onwards, the use of injection moulding machines made it possible to increase production.

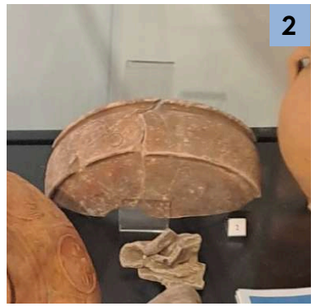


9 - Reconstruction drawing of a Roman pyxis , © Sarah Fauvel, Inrap

9 Pot Luck
Ceramics from the Wells and Local Finds

The soil of Izernore offers several sources of clay, some more suitable than others for making terracotta objects. A tile factory, now defunct, was even established in Cessiat at the end of the 19th century. Several clues suggest the presence of a workshop producing common ceramics during Antiquity in *Isarnodurum*.
Ceramics are among the items most commonly found by archaeologists at excavation sites, from prehistory to the present day.

1 - Bowl (Drag. 37)
Ceramic. 1st–3rd century. Izernore: Chemin des Trablettes (2022). Inv. no.: 75.6-002 (on loan from the SRA).
This type of shiny red ceramic, known as 'sigillata', was produced in specialised workshops.
This example comes from Lezoux (63) in central Gaul and features a moulded decoration of medallions with sea monsters.



2 - Carinated bowl
Ceramic. 2nd–3rd century. Izernore: Chemin des Trablettes (2022). Inv. no.: 225.002 (on loan from the SRA).
This bowl belongs to the category of clay-coated ceramics, for which it is often difficult to identify the exact production workshop.
In this case, it could be Chaumergy (39), Gueugnon (71) or Optevoz (38).

3 - Storage pot (Halt. 62)
Ceramic. 1st century. Izernore: Chemin des Trablettes (2022). Inv. no.: 75.7-003 (on loan from the SRA).
In this pot, 2.5 litres of sediment were sieved. They revealed more than 1,000 seed and fruit remains, corresponding to 17 taxa (species or families): mullein (Verbascum sp.), stinging nettle (Urtica dioica), spotted hemlock (cf. Conium maculatum), soft-leaved geranium (Geranium molle), bird's knotweed (Polygonum aviculare), etc. This pot, which may have been deliberately discarded, was produced in Lyon (69), Vienne (38) or Aosta (38).

4 - Kiln wasters and overcooked handle
Ceramic. 1st–3rd century. Izernore: north of the village (1998). Not listed (SRA deposit).
One of the handles has abnormal bubbles on the surface, possibly a sign of thermal runaway in the kiln.
The second handle appears to correspond to that of a Halt pot. 62. The last item, called 'moutons' ('sheep'), is an amalgam of several ceramics that stuck together in the potter's kiln. These are indications of local production.

5 - White-clay "red ware" pottery, pot and dish
Ceramic. 1st–3rd century. Izernore: municipal housing development (1970). Not listed in inventory (SRA repository).
The category of red-turned ceramics with white clay had to be created to describe the discoveries made in Izernore.
For the moment, it has only been identified at this site. It is possibly a local production.

6 - Oil lamp (Loeschcke IV)
Ceramic. Mid-1st to early 2nd century. Izernore: Chemin des Trablettes (2022). Inv. no.: 27.3-002 (on loan from the SRA).
This oil lamp features a moulded decoration referring to the fable 'The Fox and the Crow'. The latter is known in Antiquity through the writings of the Greek Aesop and the Roman Phaedrus. This lamp was manufactured in 'La Butte' workshop in Lyon (69).

10 Treading Through History
Soles and Wooden Finds

Wooden objects were commonplace in the daily lives of the Gallo-Romans: clothing, tableware, decoration, transport, tools... Unfortunately, they decompose quickly in most contexts. The excavation of wells in Izernore has led to the discovery of some exceptional objects. Although they have been stabilised, the originals remain fragile and prolonged exposure would jeopardise their conservation. This is why the objects in this display case are high-quality facsimiles, made by Christophe Picod, a researcher and wood turner. .

1 - Decorative mount/appliqué

Boxwood. 2025, © Cpicod.fr, based on: 1st–3rd century Izernore: Chemin des Trablettes (2022). Inv. no.: 75.7 (SRA).

The mount/appliqués are fixed in the centre with a nail. Those discovered in Izernore were turned on a quarter.

You can find one of the copies to touch in the play area.

2 - Split maple soles, one with restored leather

Maple. 2025, © Cpicod.fr, made based on: 3rd century Izernore: Chemin des Trablettes (2022). Inv. no.: 75.7 and 103.7 (SRA).

These soles have bases that raise the footplate above the ground.

In continental Europe, only 121 soles from the Roman period have been discovered. You can find a pair to try on in the play area.

3 - Polisher

Boxwood. 2025, © Cpicod.fr, based on: 3rd century Izernore: Chemin des Trablettes (2022). Inv. no.: 103.7 (SRA).

Initially interpreted as a spool, this wooden tool is thought to be a polisher, probably used to work leather and/or fabrics.

4 - Operational sequence for comb manufacturing

Boxwood. 2025, © Cpicod.fr, based on: 1st–3rd century Izernore: Chemin des Trablettes (2022). Inv. no.: 75.7 (SRA).

These five elements show the operational sequence used to transform a piece of boxwood into a finished comb. They are based on the rough drafts and scraps discovered in Izernore.

4a - **Raw boxwood board** - planing and modern band saw

4b - **Saw marks for the central section and wood chisel on the bevel** - wood chisel

4c - **Wood rasp over the entire surface** - scraper over the entire surface and two-handed or two-handle plane

4d - **Saw on the central section and scraper for the bevels** - wood chisel and two-handed plane

4e - **Cutting the teeth during the cutting process, polished to a shine and saw blades** - saw with guide and fine saw with guide

11 The exceptional discovery of two soles

Two complete soles, made of maple wood, were discovered in the wells, which were still filled with water. They correspond to shoes of the *sculponae* type (shoes with wooden soles to which a piece of leather is attached).

The first sole, a rare example

The joint work of Blandine Lecomte-Schmitt, xylologist, and Christophe Picod, researcher and wood turner, has led to a better understanding of these two soles. Indeed, the combined scientific and technical expertise provided an opportunity to test several hypotheses before arriving at the reconstructions. This can therefore be described as **experimental archaeology**.

On the first sole discovered in Izernore, **small nails** fixed around the edge were used to hold the piece(s) of leather in place, which supported the foot all the way to its tip, either by covering it or acting as lacing.
It corresponds to a size 29 today, left foot, or that of a 5-6 year old child.

1 and 2 - Side view and bottom view of the first sole, © Flore Giraud, Inrap

The second sole, unique to date

The second sole does not complete the pair.
It is also a left foot and the leather pieces are held in place differently.
A perforation between the toes allowed a cord or leather strap to be inserted in the manner of a tongue, secured by a small nail on the reverse side.

At the back, the sole has been split along two-thirds of its length. A strip of leather at the instep was to be inserted into this slit, thus creating a kind of cushioning at the heel.
This type of sole is extremely rare in the Roman world.
It corresponds to a modern size 27, for a child aged around 4 to 5 years old.

3 and 4 - Side view and bottom view of the second sole, © Flore Giraud, Inrap

The Right Shoe for the Right Foot

Roman fashion offered a wide variety of shoes, suited to different uses:
- the *carbatina*, a shoe resembling a ballerina flat made from a single piece of leather;
- the *caliga*, the soldier's shoe, with small nails under the sole, practical for preventing slipping on the battlefield or on the road;
- the *soccus*, an indoor shoe, a kind of slipper;
- and many more.

5 - Comparative views of the two soles, © Flore Giraud, Inrap

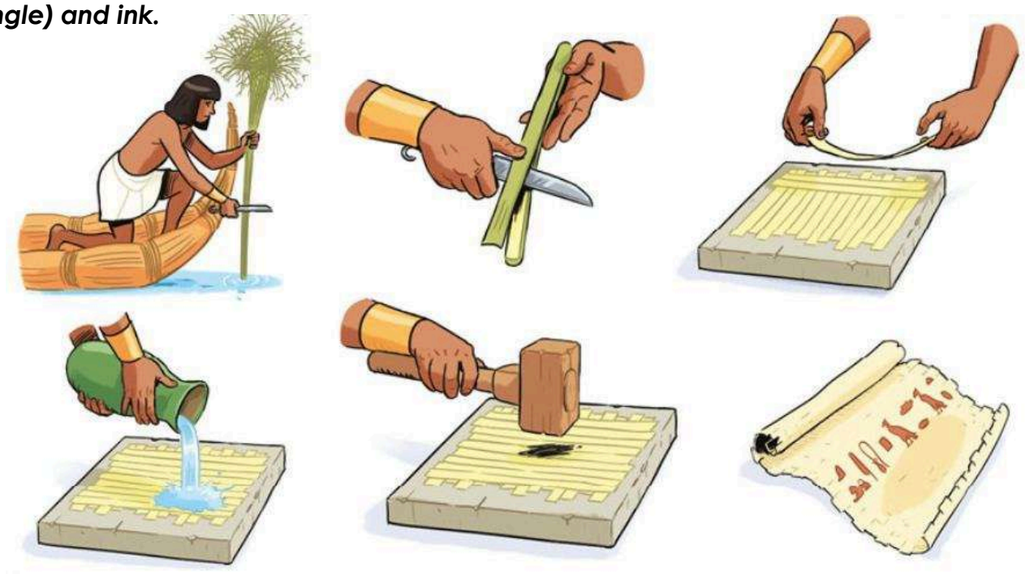
12 Writing materials among the Gallo-Romans

Before becoming the medium for numerous ink writings, papyrus is a plant. Papyrus (Cyperus papyrus L.) is widespread in the wetlands of most of the African continent. It is also called paper sedge, papyrus sedge or Nile sedge.

The sheet to be touched on the stand is made of real papyrus, but it is not antique.

Papyrus. 21st century. Made in Egypt. Herbin.

Papyrus sheets have many advantages: they are light and resistant. It seems that this writing material was expensive. There are therefore sometimes traces of recycling: worn, recut, washed scrolls. Sometimes, the original text remains visible, for example under infrared light. The Romans wrote on papyrus and on certain tablets with a calamus (a type of reed cut at an angle) and ink.



Drawings of how a papyrus sheet is made, based on a papyrus plan, ©Nefernathy/Medium

13 Writing materials among the Gallo-Romans

Wooden writing tablets come in two forms: **wax and ink.**
The wax tablet consists of a small board with a hollowed-out centre to hold a layer of wax. It is written on with a stylus. In the case of the ink tablet, a flat board is inscribed with ink. Single-sheet tablets were mainly used for schooling, while smaller ones were used as labels.

The writing tablet on the stand is a replica of an ancient tablet, with beeswax.

Wood and coloured beeswax. Contemporary period.

Other types of tablets consist of a variable number of sheets forming a codex. Assembled in pairs to form a duplex codex, the sheets are most often in threes, a triplex codex, for recording important documents. Multiplex codices with five or more sheets have also been discovered.

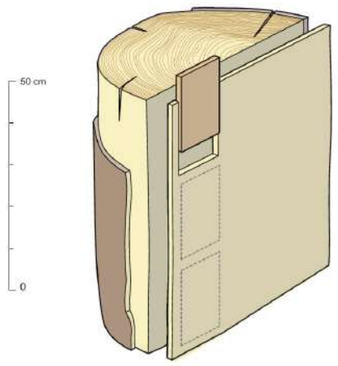
14 Local production of writing tablets?

Seventeen writing tablets, some complete and others highly fragmented, were discovered in the wells at Izernore. These objects, which were official documents or accounting records, travelled extensively throughout the Roman Empire.

From timber to tablet

The manufacture of tablets involves several stages:

- logs are split or sawn into slats of the desired dimensions;
- the area to be hollowed out is marked with a drypoint and a ruler before being cleared with a chisel;
- holes are drilled to bind the sheets together;
- notches may be cut with a saw along the lengths so that the documents can be bound in bundles and carried easily;
- the surfaces are then covered with wax.



Tablet being made on a wooden block, © Pierre Rigaud, Inrap

Wax tablets are generally made from coniferous woods. In Izernore, **fir** and especially **spruce** were used for tablets.
Elsewhere in the Roman world, tablets written in ink were made from local hardwoods and were smaller in size than those made from coniferous wood, generally corresponding to notes and personal correspondence.

Drafts and other clues

The large quantity of small fragments and scraps, as well as the presence of a tablet resembling a draft, raises the question of their local manufacture.
This production could have benefited from local resources of fir or spruce. These tablets are single sheets or assembled into codices, sometimes engraved on the reverse side with a mark or name.
Archaeologists also found an exceptional tablet on which there are still lines of handwritten ink.

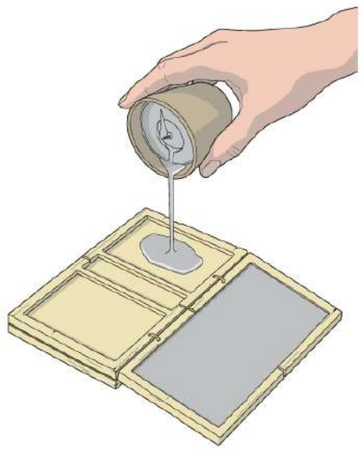
Draft tablet in spruce, front (1a) and back (1b), © Flore Giraud, Inrap

The tablet above is larger than the others. On one side, there are markings delineating an area to be hollowed out.
However, the tablet has not been shaped and appears to have been abandoned in the early stages of its manufacture.
The xylologist, a wood specialist who studied these objects, believes that this is the rough draft of a tablet.
This discovery supports the hypothesis that there was a workshop for manufacturing writing tablets at the Izernore site.

15 Ancient writing tablets

The use of tablets, known since ancient Egyptian times, continued into the Middle Ages. Tablets could vary in size and number of pages, ranging from labels to 'notebooks'.

A three-page codex

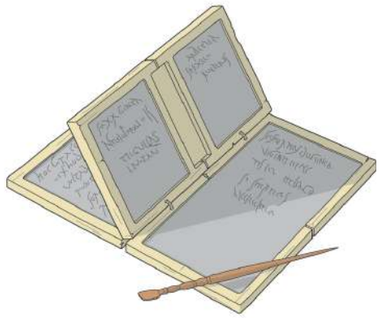


The three panels are assembled with two cords and wax is spread in the hollowed-out sections.

Leaves 1 and 3 are identical, with one smooth side (cover) and one inner side hollowed out over the entire surface.

Leave 2 also has one side that is completely hollowed out and one side divided into three parts, the narrowest of which is in the centre and does not receive any wax.

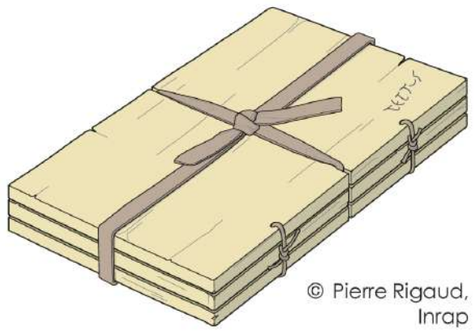
Leaves 1 and 2 are sealed. They are held together by a tie secured by the witnesses' seals.



On page 5, the text could have been written widthwise, probably to differentiate between leaves 1 and 3.

The three leaves are bound together for transmission or preservation of the document.

The text engraved with a stylus may correspond to the name of the craftsman or owner of the tablet.



© Pierre Rigaud, Inrap

The important text, *scriptura interior* (inner text), is written on pages 2 and 3.
The nature of the contract and the names of the witnesses are mentioned on page 4, on either side of the central section. This section, which is unwaxed, is intended to receive the seals.

Tablets used and reused

This spruce tablet is completely hollowed out on one side (verso 2b) and in three parts on the other side (recto 2a), corresponding to the second leaf, the central one, of a ***codex triplex***.

2 - Central leaf of a codex triplex, recto (2a) and verso (2b), made of spruce, © Flore Giraud, Inrap

This spruce writing tablet consists of a single sheet. On the reverse side (back of the tablet) there is a ***graffito*, or engraved name**. This could be the name of the tablet's owner or the workshop that made it. It could also be the name of the recipient in the case of correspondence.
It may also be a "school notebook", in which case the name could be that of a pupil.

3 - Spruce writing tablet, single leaf, with graffito, © Flore Giraud, Inrap

This fir wood writing tablet has six lines for writing in ink in landscape format. The only tablet from Izernore to feature ink writing, it is a **reused wax tablet**.
In fact, ink tablets do not usually have recesses (as shown by those discovered at Vidolanda, England).
The text appears to be correspondence.

4 - Fir wood writing tablet reused as an inkwell, © Flore Giraud, Inrap

16 The Temple of Izernore : 240 years of mystery

Located north of the village, the temple's three corner pillars have always stood tall. From 1784 to 2014, from romantic engravings to archaeological research, this Historic Monument has attracted many and varied interests.

A temple, home to an unknown god

There were many temples in Roman Gaul. Places where the gods reside, they are equipped with a ***cella*** (a closed area that houses the statue of the deity) accessible only to priests. For the temple of Izernore, among the hypotheses about the identity of the deity celebrated, we can consider: Mars (the god of war) or Mercury (the messenger of the gods).

Same function, different styles

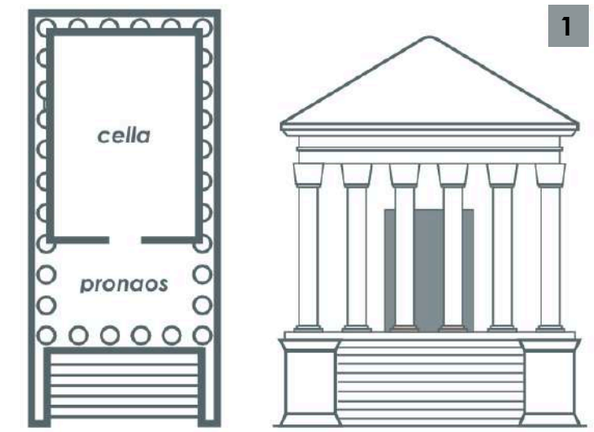
The shape of temples evolved with the development of construction techniques and the importation of new cultures.

Many Gallo-Roman temples deviate from Greco-Roman standards or the typical fanum layout. Like the temple at Izernore, some even combine elements borrowed from both models.

Among these different shapes, the Greco-Roman temple is characterised by its rectangular cella. It is preceded by a ***pronaos*** (vestibule or porch). A podium supports the entire building. The system of ***architectural orders*** governed its proportions and ornamentation.

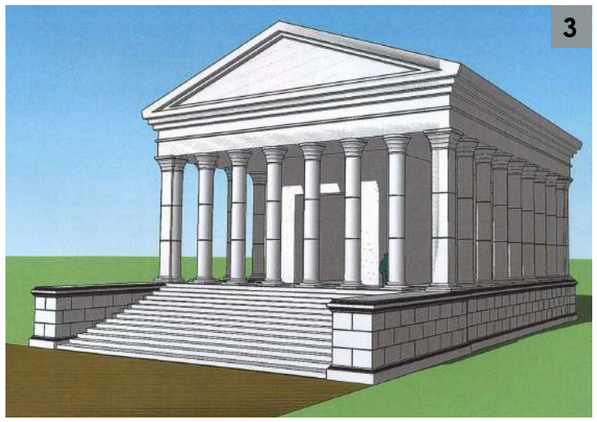
In Gaul, these stone temples were often erected in the heart of important cities, where the local authorities were based.

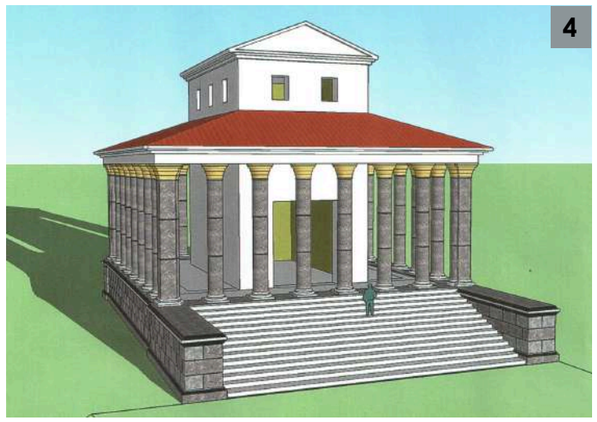
From the 1st century AD onwards, another type of temple appeared in the former Celtic territories of the Roman Empire: the ***fanum***. With a central plan and open to the east, these buildings were constructed of stone, wood and/or earth. Their square cella was surrounded by a gallery. The latter, frequented by the faithful, took the form of a portico with a roof supported by posts or columns.



1 - Plan and elevation of a Greco-Roman temple

2 - Plan and elevation of a *fanum*





3 &4 - Proposals for the restoration of the temple at Izernore, © Daniel Parent, Inrap and Djamila Fellague, University of Grenoble Alpes

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