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Lise Augustin-Rolland, Élise Nectoux, Hélène Darteville, Bertrand Dousteysier, Élise Fovet, Gabriel Rocque

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Healing Spas in the Arverni Territory (France, Auvergne Rhône Alpes)

Lise AUGUSTIN-ROLLAND

Université Clermont Auvergne (UAR 3550; ArAr, UMR 5138) /
Ingénieure d'études, 4 rue Ledru, 63000 Clermont-Ferrand, France.
lise.augustin@uca.fr

Élise NECTOUX

French Ministry of Culture (ArAr, UMR 5138; ArScAn, UMR 7041) /
Conservatrice du patrimoine, Service régional de l'archéologie d'Auvergne-Rhône-Alpes,
4 rue Pascal, 63000 Clermont-Ferrand, France.
elise.nectoux@culture.gouv.fr

Hélène DARTEVELLE

French Ministry of Culture (ArAr, UMR 5138; ArScAn, UMR 7041) /
Ingénieure d'études, Service régional de l'archéologie d'Auvergne-Rhône-Alpes, 4 rue Pascal, 63000 Clermont-Ferrand, France.
helene.dartevelle@culture.gouv.fr

Bertrand DOUSTEYSSIER

Université Clermont Auvergne (UAR 3550) / Ingénieur de recherche, 4 rue Ledru, 63000 Clermont-Ferrand, France.
bertrand.dousteyssier@uca.fr

Élise FOVET

CNRS, Université Clermont Auvergne (UAR 3550) /
Ingénieure de recherche, 4 rue Ledru, 63000 Clermont-Ferrand, France.
elise.fovet@uca.fr

Gabriel ROCQUE

Service d'archéologie préventive du département de l'Allier (Citeres, UMR 7324) /
Operation manager, 1 avenue Victor Hugo BP 1669, 03000 Moulins. France.
rocque.g@allier.fr

Abstract: The Arvernian territory is located in the heart of the Massif Central (central France), a highland region largely shaped by ancient volcanism and teeming with thermal waters, hot or cold, salty or not, exploited at least since the Roman period and very widely used in the 19th century.

Curative bathing is attested to since the beginning of the Roman Empire, in different forms: from simple springs equipped to receive ex-votos to thermal facilities, some situated near important urban centres (Vichy-Cusset, Royat-Chamalières), and others remotely located in mountains (small urban centre of Le Mont-Dore). This territory is strewn with thermal baths and healing springs where practices are diverse but always under gods patronage.

This article aims to present an overview of the current research in this region, carried out by various teams. After a general presentation of the Arvernian territory (mineral water resources and the spatial organisation during Roman period), we will show the current state of archaeological knowledge on Roman thermalism in this area, mainly focused on Vichy-Cusset and Le Mont-Dore.

Keywords: Healing spas, territory, pilgrimage, sanctuaries, Gallo-Roman thermalism.

Introduction

The Arverni territory is located in the heart of the Massif Central, a medium-altitude region largely shaped by ancient volcanism. Due to its geological formation, this territory has a substantial hydrothermal potential, with mineral sources of widely varying temperature and salinity (Figure 1).¹ Throughout Antiquity, hot

springs² were used extensively for their healing properties in various ways (Figure 2). The use of cold mineral springs in curative spas is now well established in Vichy-Cusset, in the same manner as in neighbouring areas. Addressing curative balneology on the scale

(Aupert 1991: 188; Aupert 2012: 308), and that some facilities were clearly bipartite, with only one part being supplied by mineral water, as at *Aquæ Cæsaris*, in Tébessa, Algeria (Thébert 2003: 371).

² BRGM (French Bureau of Geological and Mining Research) states that a spring is considered to be hot when the temperature at its emergence reaches 30°C or above.

¹ We focus on sites that used mineral waters at least partially. Indeed, it is accepted that healing spas did not only rely on mineral waters

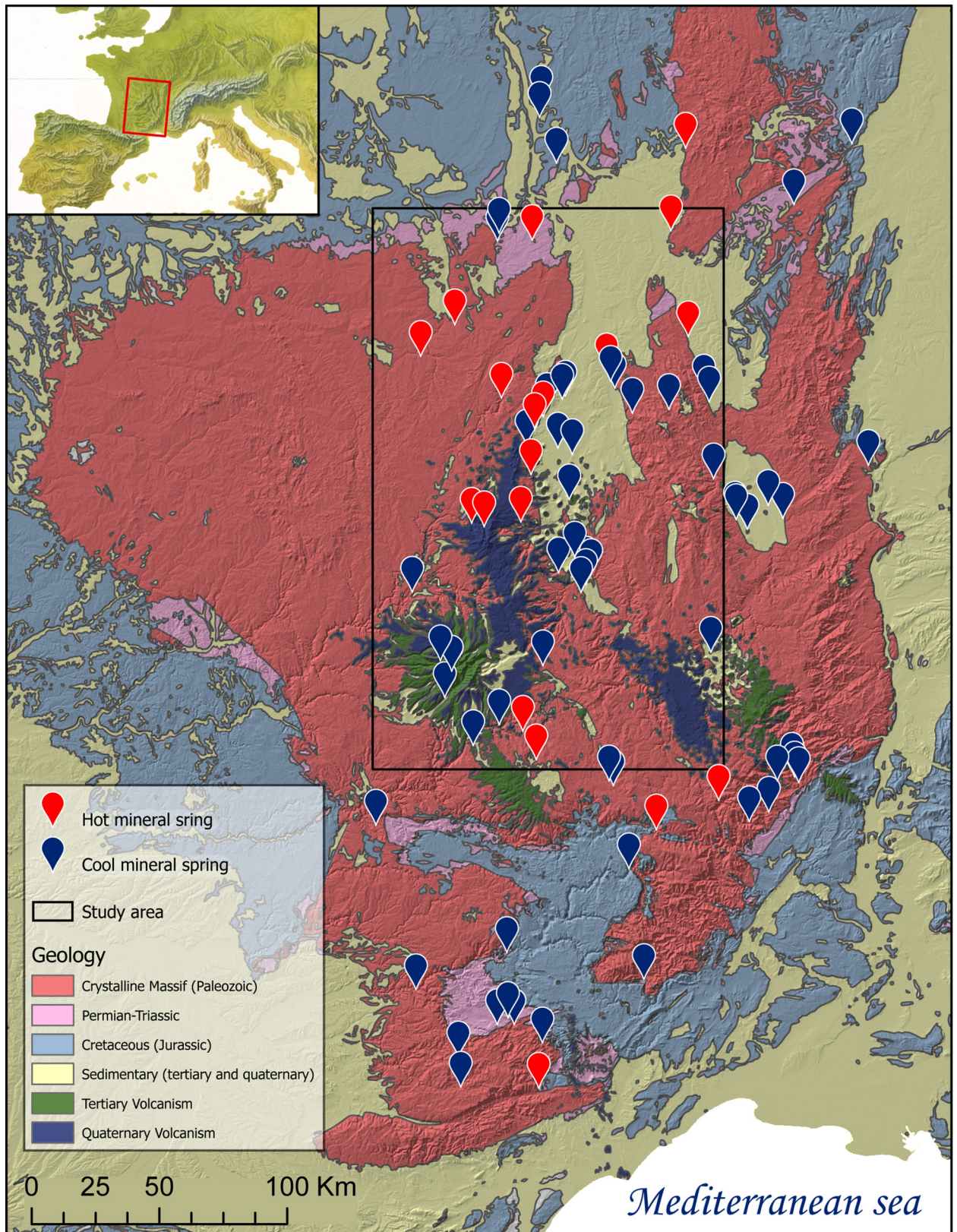


Figure 1: Mineral springs of the Massif Central. Author: É. Fovet (after Boineau, Maisonneuve 1971; Risler 1974).

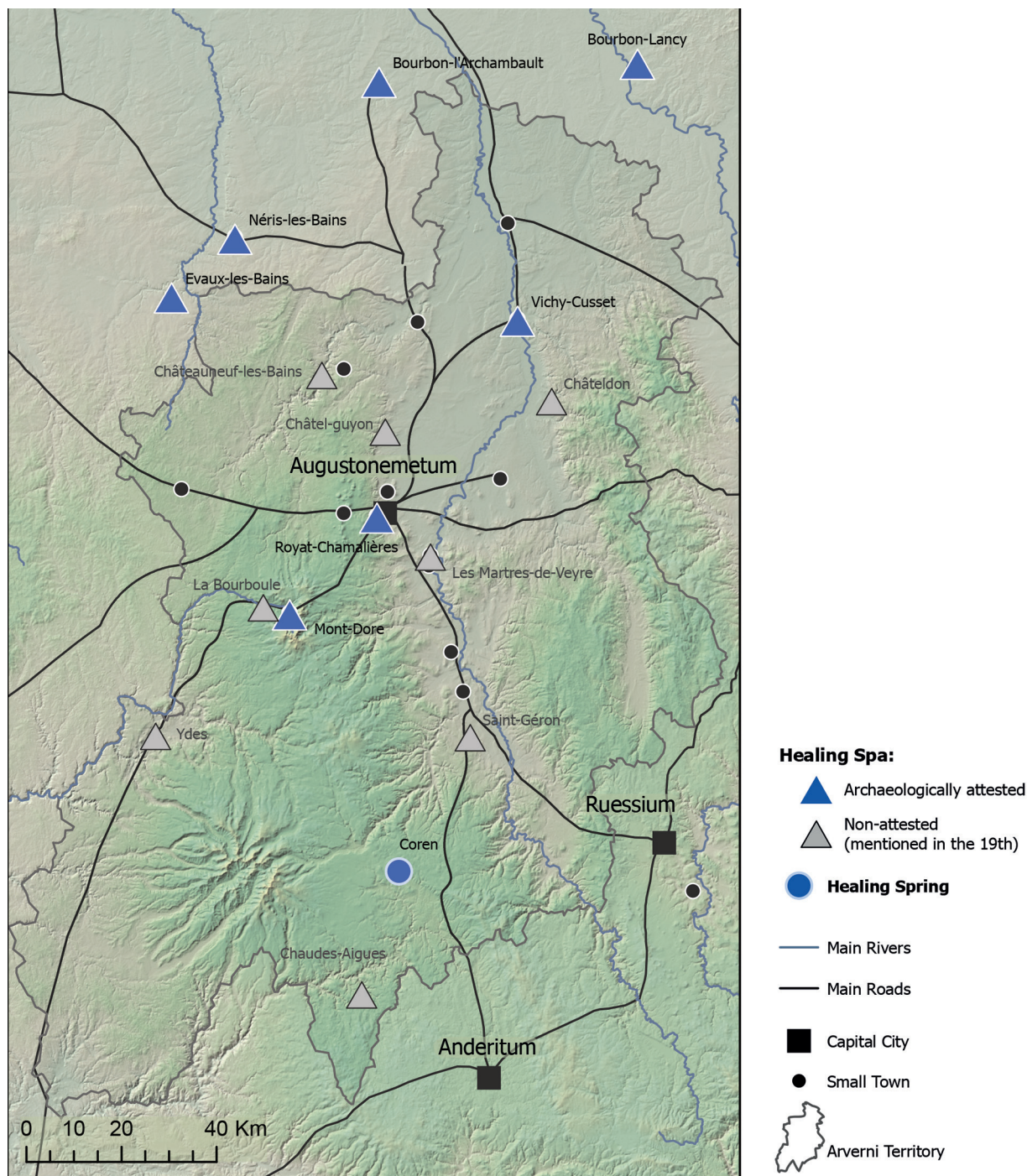


Figure 2: Roman healing spas in the Arverni territory. Authors: É. Fovet, M. Dacko, É. Nectoux, B. Dousteysier. Base map: after IGN.

of an ancient *cite*, or tribal territory, entails asking questions about the natural potential of the region, the attested sites³ and their distribution, as well as regional

customs.⁴ On the scale of a particular site, accessibility, the types of installations and the remains of specific furnishings need to be examined.

³ The definition of healing balneology is difficult to apply to remains that are only partially preserved or that were excavated in the past. As such, J. Scheid (1991: 209) warns: 'It is difficult, for all these reasons, to assign healing properties to spas found near sacred sites, as well as to consider as hydrotherapeutic every sanctuary equipped with spas, or even nymphaea or labra'.

In the 19th century, regional balneology was flourishing. It took many different forms, from modest rural facilities to elegant upper-class resorts. There was a genuine

⁴ As studied by S. González Soutelo (2012).

commercial interest in evoking the roots of the practice in Antiquity, which drove source operators and owners to base their reputations almost systematically on the age of their springs. This enthusiasm led to the discovery of a large number of archaeological remains, as well as the identification of prominent sites within the Arverni territory. But the downside is that the historiographical weight of these ancient discoveries, sometimes badly described or misinterpreted, has caused some sites to be dismissed (such as Châteauneuf-les-Bains, Châtel-Guyon, Châteldon, La Bourboule⁵, Saint-Nectaire), while others are still considered potential sites which should be studied more thoroughly (Les Martres-de-Veyre, Chaudes-Aigues). Some authors have tried to identify the cities named on the Peutinger Table, with the term ‘*Aquis/Aquæ...*’, without basing their hypotheses on concrete remains.

This research history has contributed to a biased vision of ancient thermal baths, which now needs to be rectified. The archaeological documentation is incomplete (outdated excavations), and the remains have often been destroyed, are inaccessible or heavily altered, and yet a reassessment of the data is still possible. Within this context, several teams are working on the three symbolic sites of the late Arverni territory (the Royat-Chamalières and Vichy-Cusset complexes, and the Mont-Dore site). We will not focus here on saline springs, since we lack evidence of their use for healing purposes in Roman times. This renewed archaeological approach, based on a critical re-examination of the data, demonstrates the complexity and the plurality of archaeological truths. This presentation is an opportunity to bring these findings together through a territorial approach, a milestone in the domain of regional research.

AUGUSTONEMETUM (H. Dartevelle)

Augustonemetum (‘the sanctuary of Augustus’), the centre of the Arverni territory on which the present-day city of Clermont-Ferrand was built, was created at the dawn of our era on the Via Agrippa, a major route linking Lyon (capital of the Gauls) and Saintes (Aquitaine’s capital). It was established at the foot of the Chaîne des Puys and the fault escarpment opening onto the Limagne plain, in a small protected sedimentary basin. Located well away from the Allier River but dominated by numerous volcanic mounds and particularly rich in thermo-mineral sources, this place was an ideal setting for the city. Several satellites, among them a sanctuary, thermal baths, a theatre, usually associated with settlements, were indeed built on the outskirts of the city, organized around the

exceptional Temple of Mercury at the summit of the Puy de Dôme, one of the largest mountain sanctuaries of the Western Roman territory (Dartevelle 2022a; Dartevelle 2022b). The Royat spas are discussed here in their territorial context, inherently connected to the city of *Augustonemetum*.

The Royat spas

The so-called ‘Royat spas’, mainly located in the municipality of Chamalières, are situated in the downstream section of the Royat valley, carved out by the Tiretaine River, between a lava flow and an arkose bank, 3km west of the urban centre of Clermont-Ferrand. Five springs are currently tapped on the thermal site: Eugénie, César, Saint-Mart, Saint-Victor and Auraline (the latter was recently bored). When they emerge, these waters are generally rich in bicarbonate, chloride and sodium, and highly gaseous, with temperatures between 27° and 34°C. There, one can find treatments for arthrosis, arteritis, and Raynaud syndrome.

Most of these sources were tapped during Antiquity, yet their chronology remains uncertain, like that of the bathing complex. Were they at the origin – at the beginning of our era – of the development of an urban area and a burial site on the Via Agrippa, in the vicinity of *Augustonemetum*? The exploitation of the arkose quarry at Puy de Chateix for the first public buildings (*Augustonemetum*, or even the early version of the Temple of Mercury) might have contributed to this development. Undoubtedly, the Royat spas were a milestone in the pilgrimage to the Temple of Mercury, only 7km away. Their connection to the theatre near Montaudou was considered, as was the case in Moingt or Salt-en-Donzy in the Loire region, where there was a place of worship combining spas, a theatre and a sanctuary. This idea was finally ruled out since the Montaudou theatre is facing another direction, toward the rising sun, and is associated with a different sanctuary and urban area, 1.5km southwest of the ancient city.

The first mention of this thermal complex dates back to the 16th century. It is known primarily from ancient and poorly documented discoveries, made when the thermal springs were first exploited in the 18th century. One of the pools, still visible today, was restored and designated as a Historic Monument (Figure 3). Ancient records mention pipes, canals and underground masonry, enigmatic vaulted cellars, clogged pipes, water catchments, hypocausts, marbles and mosaics, entablatures, column capitals and mouldings, etc. As regards the catchments, several discovery reports mention wells made of concrete or pine timbers. One particular and explicit example, a report written by A. Petit in 1876 near the Saint-Victor source states:

⁵ P. Aupert (2012: 308) mentions the presence of Borvo, water deity, in La Bourboule, but the archaeological files are particularly incomplete.

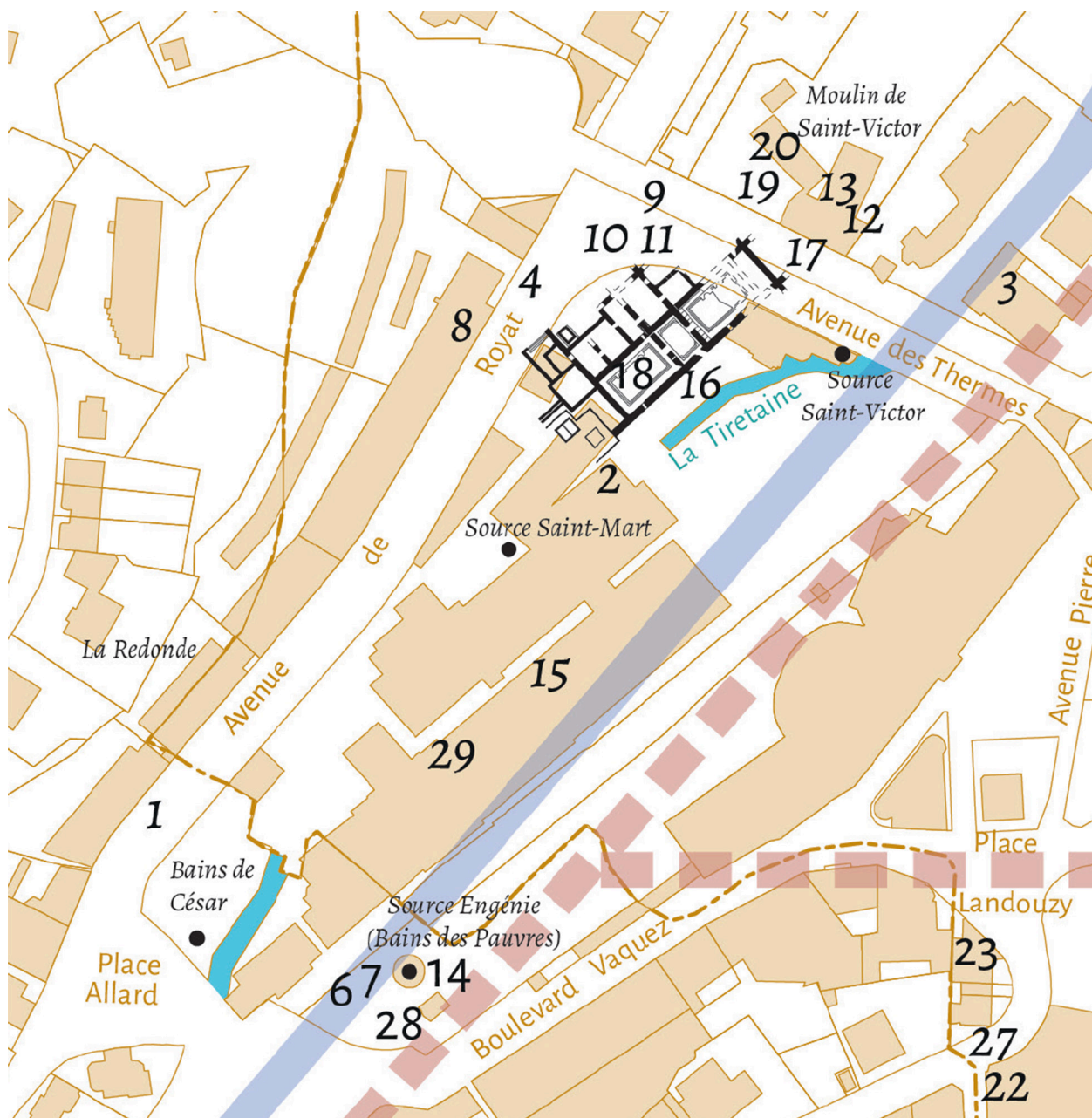


Figure 3: Royat-Chamalières, localisation of the discoveries on a cadastral plan. Extracted from: Dartevelle 2022a, t.2: 162. The numbers refer to remains discovered near the thermal baths.

‘a square well, made of fir timbers, 1.20m long. On each side, overlapping timbers were interlocked with alternating rods and grooves; the edges equipped with tenons and mortises ensured the immobility of the framework... Beneath this structure, 6m deep, we unearthed a thick lead pipe, with a diameter of 0.15m...’ (Petit 1884: 5). The map of the remains made by Petit is incomplete (2800m²) and thus does not allow us to reconstruct any routes. At least three pools in the same alignment, yet different in size, each had two rows of seats, confirming the immersion practice (cf. Figure 3). To the northwest, hypocaust-heated rooms adjoined the pools. More pools were discovered downstream

in 1946 (Desforges *et al.* 1970: 375-376; Vallat and Le Barrier 2022: note 20).

Hot springs bubbling up at a temperature of 35°C were reported at a depth of two metres near the pools (Petit 1884). However, it is difficult to correlate the sources with the filling of the pools without taking another thorough look at the available documentation. A. Petit noticed the absence of concretions inside one of the pools and hypothesised that it was filled with freshwater. It is likely that the Tiretaine fulfilled this role too, at least for the cold pools, cooling the hot water, flushing latrines and greywaters. The presence

of at least one polygonal arkose basin, described as close to the Sainte-Eugénie source, suggests that the water was drunk. A water fountain was also located near the Saint-Victor source ‘with a taste of wine, yet very unpleasant to drink’ (Belleforest 1575).

Did the construction of the spa complex happen at the same time or after the springs were tapped? Given the current state of academic research, the question of the site’s genesis and evolution remains unanswered. We have to imagine *Augustonemetum* in the 1st century AD as a city under constant construction. The public buildings were likely built once the roads and the first residential areas were finished, over the course of the 1st century. They were made of arkose, while trachyte is associated with the middle of the 2nd century, a time when the city was being embellished. Despite the absence of tangible dating evidence, the construction of a spa complex in Royat, an idea which seems at first rather extravagant, would be more coherent with the mid-2nd century, when the city’s appearance was embellished with new buildings on the pilgrimage road to the Temple of Mercury.

The Source des Roches in Chamalières

Formerly called the ‘Source de Beaurepaire’, the Source des Roches emerged at the bottom of the Montjoly hillside. It flowed at temperatures between 19.5° and 20°C, directly from the chalky and marly soil of the Limagne borders, at the end of the Royat lava flow that originated from the Petit Puy de Dôme. Its water is chloro-bicarbonaceous, ferruginous, salty, rich in sodium and magnesium, as well as in carbon dioxide, and was supposed to cure several diseases, including rheumatism. Until 1843, it flowed freely within the city gardens.

Protected by an oak forest, the Source des Roches appeared in Antiquity, first isolated from the city and yet located in its immediate outskirts. The sanctuary was frequented for a long time, at least until the Late Roman Empire, on a regular basis with the donation of anatomically-shaped pieces of wood (3000), between the end of the 1st century BC and c. AD 70. Its use began the day after the conquest, through a coin-throwing ritual (VERCA, c. 50-30 BC [Gruel 2022]), thus before the actual construction of the city, which dates back to the first decades of the 1st century AD. These elements demonstrate that the Gauls already knew about the source. No remains of buildings or improvements have been found on the site and its surroundings. The variety of the organs and limbs represented by the ex-votos does not indicate any particular pathology, but rather suggests a healing practice. In addition, a lead curse tablet (a judicial curse about a private litigation) invokes the deity of the Maponos spring (Cléménçon

2022: 122). Many cups and pitchers were discovered, indicating that the water was consumed (Figure 4). Just like the ex-votos, the ceramics were probably mass-produced and sold on site. The study of these objects is the subject of a collective research project examining the entire site from a new perspective, initiated by A. Wittmann (Inrap⁶).

The outskirts of the ancient city

Nowadays, this sanctuary seems exceptional from an archaeological perspective, given the extraordinary preservation of the remains due to the damp environment. Yet its prominence at the time may have been relative, in the midst of other sanctuaries springing up in this favourable geological context. Such sanctuaries may have been destroyed or are still to be unearthed. *Augustonemetum* was built on a volcanic formation (the Clermont-Ferrand mound), at an altitude of approximately 20m amid the basin. Its outskirts, long considered as a swampy area of little interest, actually offer a wealth of potential in terms of mineral resources that were exploited during Antiquity.

To the northwest, in the Fontgiève neighbourhood corresponding to the suburbs of the ancient city and currently known for its petrifying sources (hard water springs), the catchment of a source was collected in a monolithic arkose tank, completed by a rim made of marble and limestone slabs (Martinez 2021: 47-51). It was protected by a 31.5m² rectangular building, built during the last third of the 2nd century. Pine kegs were made on the upper floor, with capacities ranging from 0.74 to almost 6 litres. Were they used to transport or even sell mineral water? Did the water have healing properties? Was it a nymphaeum? On the western border of *Augustonemetum*, where the toponyms are highly evocative (Les Salins [derived from ‘salt’], Puits Artésien [‘Artesian well’]), several sources, associated with Gallo-Roman ceramic deposits, were recently unearthed (D. Tourgon and Evéha, 2022 excavation of the Hôtel-Dieu 3, study ongoing). In the context of ongoing preventive archaeology, recent discoveries of especially well preserved remains, found deep and in a damp environment, have contributed greatly to reorienting urban archaeological issues in these previously neglected areas.

AQUIS CALIDIS (L. Augustin-Rolland and G. Rocque)

The municipalities of Vichy and Cusset are located in the southeast of the current Allier department, which was the northern part of the Arverni territory, at approximately 46km from the main city. They lie to the east of the Grande Limagne, on the western border of the Montagne Bourbonnaise, in the alluvial plain of the

⁶ French National Institute for Preventive Archaeological Research.



Figure 4: The Source des Roches, outdoor sanctuary excavated in 1970-71.

a: Painted cups discovered in 1968 in the Source des Roches. Photo: M. Veschambre.

b: Cups and ex-votos were probably made by craftsmen and sold in a shop near the sanctuary. 3D reproduction: Court-Jus Production. <http://www.augustonemetum.fr>.

Allier River, near its confluence with the Sichon River which flows through Cusset from east to west, at an altitude of between 240 and 480m.

Vichy

At the dawn of the 1st century AD, the Roman city of Vichy was strategically established at the crossroads of land and fluvial transportation routes: notably, the confluence of major public roads connecting the northern part of the Arverni territory to those of neighbouring tribes – Segusiavi, Aedui, and Bituriges

(Dacko 2016). This site is located on the right bank of the Allier River – called ‘Elaver’ by ancient writers – at a crossing of this waterway which was probably a prominent communication route to the Loire region and the Aedui and Bituriges territories. It is now quite evident that the origins of the town of Vichy can be traced back to the Roman era, given the large amount of ancient remains unearthed since the middle of the 19th century. Development began during Tiberius’s reign (Figure 5), reaching an estimated maximum surface area of around fifty hectares (Corrocher 1981: 100). It was laid out around a main traffic route, going from east to west,

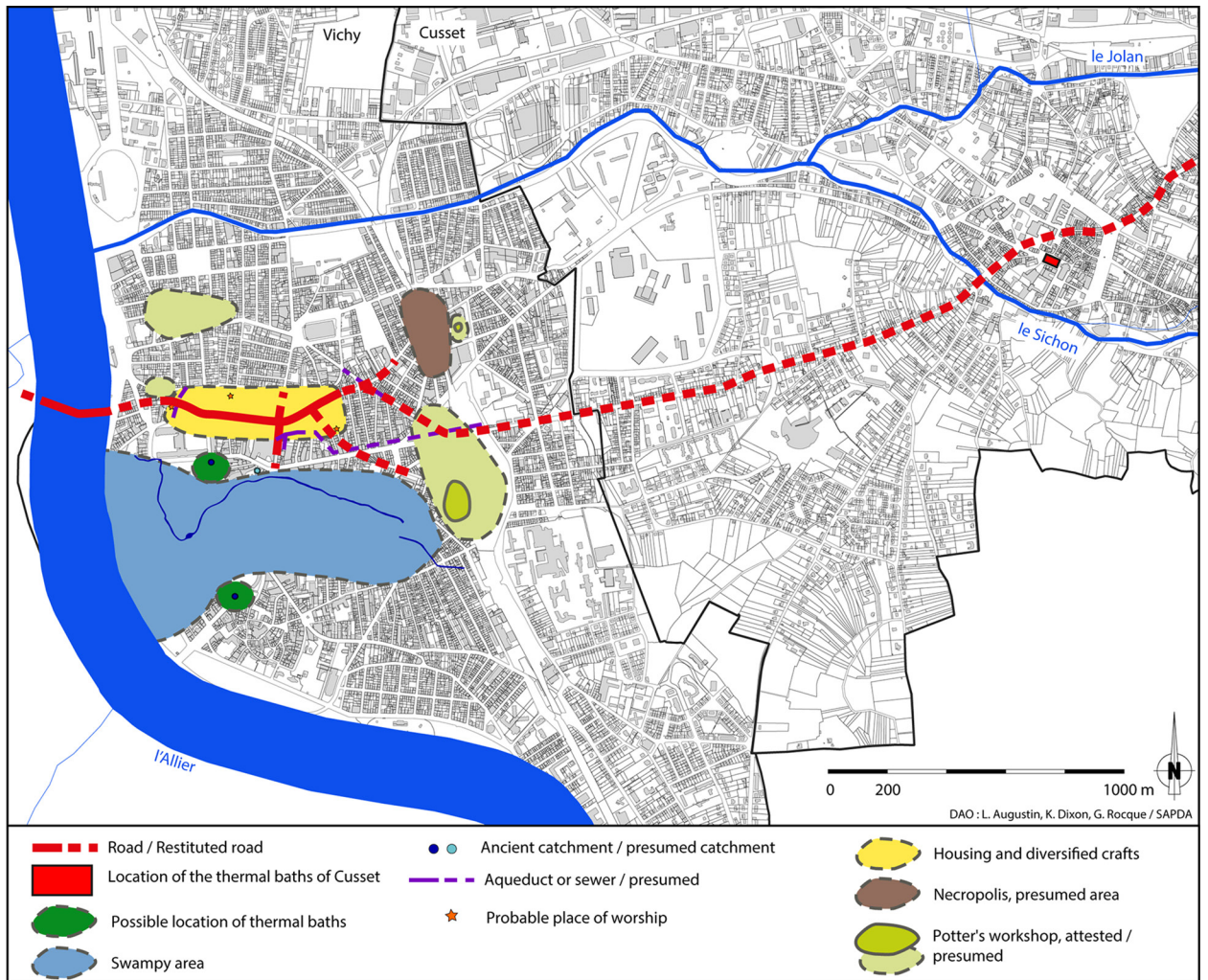


Figure 5: Connections between Vichy and Cusset. Authors: L. Augustin, K. Dixon, G. Rocque / SAPDA.

with an area dedicated to housing and diverse crafts on either side. There is little documentation about temples and public buildings. The presence of objects of worship and of a few elements of monumental architectural suggests their existence, but their importance and locations remain unknown. Outside the urban area, spaces devoted to the production of ceramics or to the cremation of corpses have been found.

It has also been confirmed that this particular site corresponds to one of the stops on the Peutinger Table: called '*Aquis Calidis*' ('the hot waters'), and it is represented by a vignette depicting a rectangular building with eight openings surrounding a roofless central space, suggesting the presence of a thermal area. In the heart of the town at least two natural springs have been tapped and developed during the Roman era: the Chomel (42°C) and Hôpital sources (32°C), located respectively north and south of the current Parc des Sources. These bi-carbonated, saline, carbo-gaseous waters originate from the Chaîne des Puys and head to

Vichy, traveling about 50km across the Limagne plain. Vichy became known as the 'queen of spa towns', under Napoleon III and its sources are still being used today as a drinking cure for digestive and metabolic disorders.

The ancient catchments of both sources were identified at the beginning of the 1940s, during cleaning and refurbishment work, and they are still in use (Figure 6, a-b). The Chomel Gallo-Roman catchment well is made of an octagonal lining of wooden planks, held in place at the corners by stakes. The Hôpital catchment is a circular masonry well of ashlar topped with an octagonal stone base. Solid tile-concrete blocking and waterproofing were deployed around the periphery of these structures (Augustin *et al.* 2020: 132-133). Similar catchment wells have been discovered in Mont-Dore, as well as in Nérès-les Bains and Bourbon-l'Archambault, in the neighbouring Bituriges territory. Inside these three resorts, the water spouted into catchment wells that were built inside the large basins before being transported to the monumental baths.



Figure 6: Vichy: remains attesting to a curative practice.

a & b: Current views of the (a) Chomel and (b) Hôpital ancient water catchments. Photos: L. Augustin, 2019.

c: Marble fragments and mosaic tesserae unearthed in 2021 near the Chomel source. Photos: S. Baraton, 2021.

d: Ex-voto, small bronze vase of the 'old rheumatic', depicting an old woman, hunched and obviously sick, dressed with a tunic and holding a cup (Musée du Louvre, Département des Antiquités grecques, étrusques et romaines, BR2936). Photo: © RMN-Grand Palais (musée du Louvre) / Hervé Lewandowski.

e: Ex-voto, drawing of a stone bas-relief depicting a woman giving birth to twins. Extracted from: Corrocher 1982: 137.

f: Ex-voto, white terra cotta figurine depicting a man with his arm in a sling. Extracted from: Mallat, Cornillon 1906: 38.

g: Ex-voto, draft of a stone statue depicting a man sitting on one leg. Extracted from: Espérandieu 1928, n° 1626.

h: Offerings, local lead-glazed cups unearthed in 1878 near the Chomel source. Extracted from: Morlet 1957: 49.

i: Offerings, small ceramic cups with carinated walls, in white slip and decorated with an ochre band discovered c. 1834-35 near the sources. Extracted from: Mallat, Cornillon 1906: 34; Morlet 1957: 107.

In Vichy, recent research has failed to unearth similar pools, and the way thermal waters were exploited during Antiquity remains largely unknown. However, the quest for a grand thermal complex has been the focus of research since the mid-19th century. Local scholars have repeatedly interpreted vestiges and

remains as being part of public baths (elements of monumental architecture, remains of basins, marble shards...) and have put forward various hypotheses about their location, but the site of the Gallo-Roman thermal facility is still uncertain (Augustin *et al.* 2020: 61-65). Given the current state of research, two possible



Figure 7: Cusset, aerial view of the 2018 excavation. Photo: T. Eyraud, G. Rocque / SAPDA.

sites merit further study: south of the Parc des Sources by the Hôpital source (B. Michaudel, Inrap, study in progress), and/or north of the park, near the Chomel source where basins lined with hydraulic plaster, shards of marble slabs, a tesserae of glass-paste mosaic and carbonate concretions have recently been unearthed – all associated with ancient demolition elements – (Baraton *et al.* 2021: 321) which suggests the presence of a Gallo-Roman building with a thermal or cult-related function (Figure 6, c).

The therapeutic properties of Vichy's thermal waters were clearly known during the Roman period, as suggested by the *ex-votos* unearthed during previous excavations (a white terracotta figurine depicting a man with his arm in a sling; a draft of a stone statue depicting a man sitting on one leg; a small bronze vase depicting an old woman, hunched and obviously sick, wearing a tunic and holding a cup; a stone bas-relief depicting a woman giving birth to twins) (Figure 6, d-g). Discoveries of drinking utensils near the sources also indicate that the waters were consumed for their curative qualities. Locally produced lead-glazed ceramic cups (form Déch. 59) were unearthed in 1878 near the Chomel spring. Dating back to the 1st century AD and encrusted with hydrothermal deposits, the cups were probably used to drink water from the source before being given as offerings. A cleaning of the sources conducted c. 1834-35 led to the recovery of several small ceramic cups with carinated walls, in white slip and decorated with an ochre band. Dating from the 1st and early 2nd centuries, they were probably locally made. Ancient writers agreed that these small vessels

were likely used to drink thermal water before being thrown into the source as offerings (Figure 6, h-i). A significant number of similar examples were discovered near the Source des Roches in Chamalières (Romeuf and Dumontet 2000: 49-52).

Cusset

Less than 3km east of the heart of the Roman city of Vichy, the ancient settlement of Cusset remains largely unknown. Important remains were discovered in the city centre during construction works in 1992-93 (Corrocher 1999), and also in 2018 during a preventive excavation which enabled researchers to assess the size and importance of the area (Chaléat *et al.* 2021), but the remains seemed relatively isolated and no evidence of a dense habitation was found nearby (Figure 7). The 2018 excavation conducted on the Place Victor Hugo uncovered a large ancient thermal complex, with a surface of at least 730m², and probably extending over 2280m², thus 57m long and 40m wide (Figure 8). Our knowledge of the building is still too limited to fully understand how it functioned and how the bathers moved around. Five rooms at least were heated by a hypocaust system (three to the southeast and two to the northwest). One of them has a very particular layout: it has an elongated shape and its surface is at least 40m², and to the south it features a large exedra and could be interpreted as a caldarium, like those unearthed in Aigues-Vives (in the Gard region) and Eyguières (Bouches-du-Rhône) (Bouet 2003: 5-6, 93-94). Several cold rooms and courtyards were uncovered but remain difficult to interpret. At least one cold pool

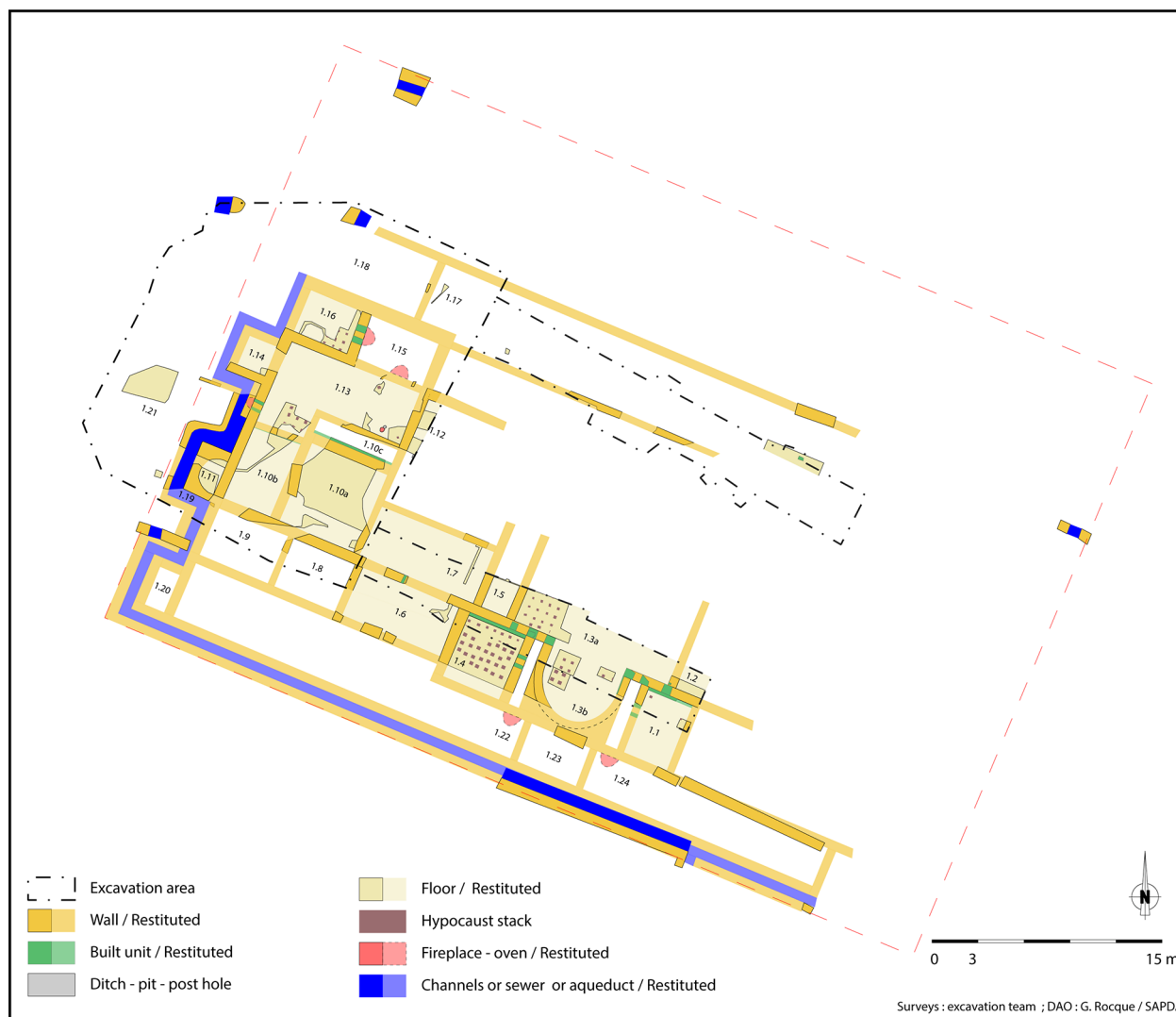


Figure 8: Cusset, general map of the building. Author: G. Rocque / SAPDA.

was adjacent to the west façade of the spas. Two other basins can be identified on the same façade, but it is not known whether they contained hot or cold water. A gutter, or a sewer, runs alongside the building’s façade and permitted wastewater drainage, as well as the sanitation of the facility by collecting rainwater and water infiltrations. The origin of the waters used in this facility is still unknown,⁷ but a catchment of the Vichy hot springs has already been ruled out, due to the higher topography of the spas. Besides, while numerous mineral sources are known to exist in Cusset, none seem to be really hot (they do not exceed 13.5°C) and all of them were bored in the 19th century.⁸ This building was most likely a public bath, considering its size and

the importance of its hot rooms. It was probably built between the Flavian dynasty and the beginning of the 2nd century – a period during which large numbers of monuments were built in Gaul – and it remained in use until the 4th-5th centuries. At the very beginning of the Early Middle-Ages, the building underwent several transformations: some hypocausts were filled in, the ancient floors of the rooms were destroyed and rebuilt, and the heating pipes were sealed. It is impossible to determine the role of this new building, which did not seem to retain its function as a spa.

Conclusion

The ancient settlements of Vichy and Cusset were connected by a road leading to Roanne (*Rodunna*), which has never been the subject of archaeological excavations, and yet its route can be reconstructed from ancient references (Fanaud 2005: 193-194) (cf. Figure 5). According to current research, an important secondary

⁷ The analysis of the concrete and plaster samples collected in the pools revealed both carbonate deposits and matrix dissolution areas that can be attributed to either hydrothermal waters or waters from source rocks (Augustin *et al.* 2020: 134).

⁸ Except for the Chambon source which might have naturally flowed on the banks of the Sichon River in 1818 (Surmely 2004: 315).

city emerged at Vichy in the ancient period, but no evidence of a spa has been found. In Cusset, it was quite the opposite, as a vast spa complex, probably public, seemed to be relatively isolated. Consequently, several theories can be put forward about the organisation and connection between these two entities. The spa town of *Aquis Calidis*, mentioned on the Peutinger Table may have developed around two main centres. Domestic and artisanal activities surrounding a place of worship could be organized around the thermo-mineral sources. This healing custom – connected to the quality of the water, which is still recognised today – would have been based on the drinking ritual. The public spas were probably located in Cusset, on one of the main access routes to the city. Moreover, these baths could have been used to purify travellers before they entered the place of worship. The existence of several thermal buildings can be suggested: the first in Vichy, located on the hot springs, probably had a curative function, while the second, in Cusset, would have served a more traditional, hygienic function. Finally, the idea that there were several healing spas must be kept in mind: one in Vichy, located on hot springs, and one in Cusset, connected to the cold mineral springs. Indeed, the use of cold mineral waters in healing spas was confirmed in Moingt, near the Segusiavi territory, called '*Aquæ Segetæ*' ('the water of the goddess Segeta') on the Peutinger Table.

MONT-DORE (Élise Nectoux, Bertrand Dousteysier, Élise Fovet)

A geographical and historical overview of the site

The Mont-Dore thermal baths are located on the northern face of the Sancy massif, in the upper Dordogne valley, at an altitude of 1040m, and 30km south of Clermont-Ferrand as the crow flies. The hot springs emerge from natural cavities within the lava flow, at temperatures between 32° and 44°C. Two of the eight sources known today at the spa have been tapped since Antiquity. The healing properties of the waters – administered as baths – were attested to in the earliest written sources from the Late Middle Ages and in the Early Modern period.

The ancient monumental complex was discovered at the beginning of the 19th century, when it was destroyed to make way for the modern spas. It combines so-called 'side by side' spas – equipped with three large pools – with a temple, and both monuments are connected by a courtyard with porticos (Figure 9). Two hot spring catchments were built, and a third source probably directly supplied a hot pool.⁹ Part of the architectural decoration can be traced back to the second half of

the 2nd century (Dousteyssier and Nectoux 2016: 716); a detailed study is currently being conducted by a multidisciplinary team.

The ancient village that accompanied the spas is known only from the fragile remains mentioned rather anecdotally in the 19th (Bertrand 1819: 16)¹⁰ and 20th centuries. Archaeological excavations are sorely lacking on this particular site, which is estimated to cover just a few hectares (Dousteyssier and Nectoux 2016: 718). Often mistaken (Bertrand 1823: 74-80) for the *Aquis Calidis* represented on the Peutinger Table or the *Calentes Baiæ* mentioned by Sidoine Appolinaire in his *Correspondences (Epist., V, 14)*, Mont-Dore cannot lay claim to these designations that must be reserved for other sites. Its ancient name is unknown, yet it should be mentioned that the village was called *Belneis* in 1315, which became 'Bains' during the Early Modern Period.

Curative uses of the waters since Antiquity

The waters are bi-carbonated, saline, carbo-gaseous and highly siliceous. These natural properties stimulate the immune system, have antiseptic and cleansing benefits for respiratory tissues, and can act as a softener for the skin and mucous membranes, as well as a vasodilator and muscular relaxant. These properties have been recognised since Antiquity. Were lung diseases and rheumatisms treated in Mont-Dore, as in the famous Baiae in the Gulf of Naples?¹¹ The natural phenomena associated with these springs may have also contributed to conferring virtues on the waters. In the 19th century, Dr Bertrand (1823: 106-107) noticed cycles – lasting between one and two hours – during which the waters would rapidly trigger tingling sensations, excessive sweating and faster heartbeat, forcing the clients to shorten their baths. Bertrand noticed that the phenomenon would suddenly stop when it rained, and that the flow of water produced intense gurgling as a storm approached. The presence of carbon dioxide was mentioned and considered as dangerous for the bathers who would settle inside the 'ancient-shaped' building overlooking the Bain de César source (Bertrand 1819: 10).

The thermal complex was connected to a temple through a courtyard with porticos, indicating – by its organisation – a strong link to the sacred (Aupert 1991: 186). Yet the temple was not built on a source and thus cannot be considered a water sanctuary. Moreover,

¹⁰ 'The new promenade lies opposite the baths, between the village and the right bank of the Dordogne River. Within the surface it occupies, we found the remains of walls, as well as a large amount of bricks. Between 0.70 or 0.80m deep, the ground was filled with shards of ancient pottery, ornamented with bas-reliefs. It should be noted that in our mountains, similar fragments are found nowhere else.' (Bertrand 1819: 16).

¹¹ The fashionable curative thermal treatments were condensed over a three-week period in Baiae (Oribase X 3,2).

⁹ It must be mentioned that Dr Bertrand (1819), who thoroughly described the remains, did not mention it.

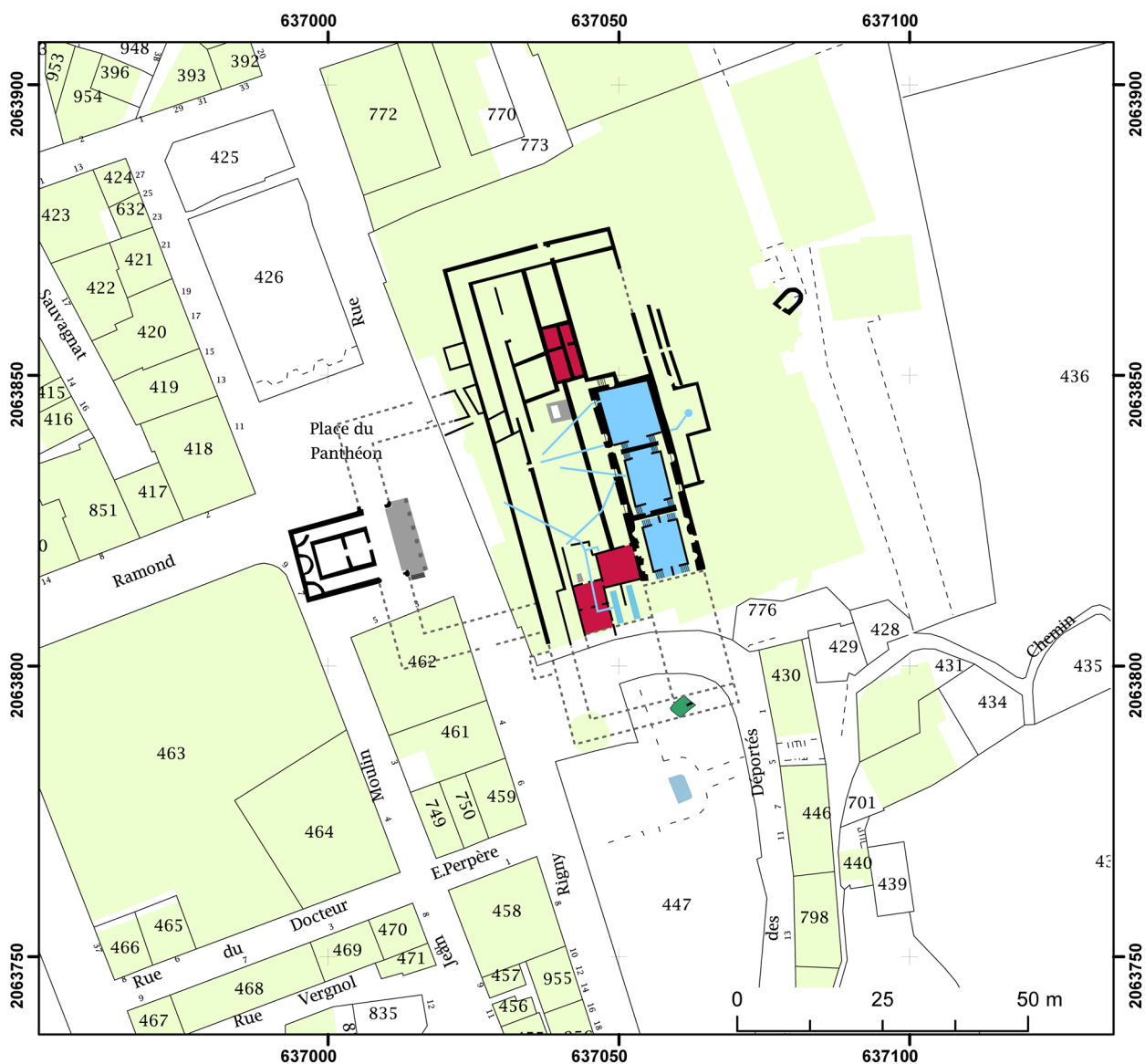


Figure 9: Mont-Dore, general map of the site. Author: B. Dousteysier.

no ex-voto could be clearly identified on site. So, the theory formulated by Professor Landouzy, and quoted by L. Bonnard (Bonnard and Percepiéd 1908: 295-296), that the bust known as the ‘Old Roman’ was a depiction of a man suffering from an emphysematous bronchial syndrome, must be dismissed (Nectoux, Dousteysier 2021: 344-345). However, the goddess Sianna – to whom a private individual (Iulia Severa) offered an altar – was a helpful deity, undoubtedly linked to the springs (Rémy, Provost 1997: *ILA Arvernes* 43). The excavation of the temple unearthed a group of statue fragments evoking Jupiter: an eagle and a bust that can be readily associated with a horse leg, thus depicting an anguiped rider, a widespread representation in the Arverni territory (Blanchard 2015). Jupiter – often represented in spas (Bonnard and Percepiéd 1908: 170-171) – was also named on silver votive plaques discovered in Vichy

(he was locally nicknamed Sabasius [Rémy and Provost 1997: *ILA Arvernes* 82-83; Augustin 2021]).

The waters were used for immersion, as confirmed by the presence of baths (Duran-Lefebvre’s map, 1926) and above all by the structure of the pools: two steps were placed along the bottom of the long sides of the northern oriented hot pools (Bertrand 1819: 19).¹² Here, we agree with H. Broise (2015: 55), who suggests the steps had a curative function, to accommodate seated sessions. There is no evidence to date concerning the ingestion of these waters.¹³ We are fully aware that this is an *argumentum a silentio*, but no cups have been unearthed at Mont-Dore, while hundreds of them were

¹² ‘Two stone benches, arranged in tiers, lined both of the largest sides’ (Bertrand 1819: 19).

¹³ Drinking is mentioned in the Early Modern Period.

found at the Source des Roches site in Chamalières (Romeuf and Dumontet 2000: 49-52).¹⁴

Conclusion

The monumental complex at Mont-Dore is located in what appears to be a very isolated site with a small urban area. It seems that the spas gave birth to the town, not the opposite. Isolated in the mountains and absent from the Peutinger Table – maybe because of its distance from major communication arteries – the site is equipped nonetheless with extensive roadworks¹⁵ (work in progress, É. Fovet), which indicates its importance in the Arverni territory. Given the mountain¹⁶ climate and the isolation of the site, it is possible that the spas were used on a seasonal basis, serving the dual purposes of therapy¹⁷ and pilgrimage. It must not be forgotten that the seasonality of the thermal cures is well documented in the sources by Herodotus and Oribasius (Guérin-Beauvois 2015: 81).

GENERAL OVERVIEW

The three cases presented here cover the same historiographical reality (three 19th century thermal spas of ancient origin, subject to partial and brief excavations), but highlight diverse archaeological realities, regarding both how mineral waters were used and how they were exploited. Some sources had little infrastructure but were highly frequented (such as the Source des Roches in Chamalières), others were tapped for a function that is difficult to identify (in Vichy for example), and others still were developed into thermal buildings (Royat, Mont-Dore, and perhaps Cusset). Thus, the practice of curative balneology, in its strict definition (using hot mineral waters and dedicated facilities) – so essential from the perspective of 19th-century archaeologists – is not invariable indeed, considering the natural potential of the area.

If we exclude from our analysis the healing sanctuaries (such as the Source de Font-de-vie in Cohen, Cantal), where ex-votos were discovered near the water catchments, curative balneology can be described according to three forms:

- prolonged immersion in hot water, in thermal pools equipped with rows of seats (Broise 2015: 55), as at Mont-Dore and the Royat spas;¹⁸
- the practice of drinking mineral waters, suggested¹⁹ by the presence of drinking cups (small bowls and cups, anthropomorphic bronze cups) near the sources, as was the case in Vichy-Cusset and at the Source des Roches in Chamalières.
- the offering of ex-votos, as at the Source des Roches and in Vichy.

Comparing these three cases, chosen for their monumental facilities, enables us to think about the form of the urban developments, triggered by the presence of springs in this territory. Two of the thermal facilities studied were built near a large urban area (a capital or a 'lesser' city). Thus, the only site mentioned on the Peutinger Table with an evocative name, *Aquis Calidis* (Vichy-Cusset), corresponds to a complex site, comprising both an urban centre with thermo-mineral water catchments (for a curative use) and monumental public baths, far from the centre of the city, the function of which is still to be deciphered. This site benefits from a geographical situation favourable to urban development, located between the Limagne plain and the Montagne Bourbonnaise, with crossroads and a bridge to cross the Allier River. In addition, numerous activities have been documented there, particularly connected to artisanal crafts. *Augustonemetum* featured a healing thermal centre with baths and a curative source sanctuary – built earlier – surrounded by sacred woods (Prat and Cabanis 2006-07). The remains unearthed nearby suggest the presence of a settlement connected to the spas and built very close to the city centre, an unusual urban feature. Similar outlying spa complexes, close to a town, were discovered in nearby territories, for example in Moingt (Loire) and in Évaux-les-Bains (Creuse). However, the third site studied, Mont-Dore, corresponds to an isolated healing spa, connected to the city by a route which was probably built to serve this site located at the end of a deep valley.²⁰ The isolation, mountainous climate, as well as the relatively small size of the settlement surrounding the facility suggest that it operated on a seasonal basis (pilgrimage²¹ / curative therapy?²²).

¹⁴ This curative source was abundantly used but it did not lead to the construction of a thermal building.

¹⁵ The importance of the site was studied in the Early Modern Era. One of the precursors of the Auvergnat balneology, the last *intendant* C. de Chazerat (1728-1824), wanted to establish a thermal facility in Mont-Dore. He started by 'opening' a convenient route.

¹⁶ In the 17th century, J. Banc (1605) was indeed surprised to find Roman buildings in 'such a harsh, unpleasant and vexing country'.

¹⁷ P. Aupert (1991: 186) identified the whole Mont-Dore infrastructure as healing spas.

¹⁸ The same apparatus was also present in other recently studied thermal facilities, for example in Chassenon (Doulan *et al.* 2015: 374-376).

¹⁹ Vitruvius and Pliny mentioned this healing practice, as well as immersion in hot springs (Pliny, *Histoire Naturelle*, 31, 9; Vitruvius, 8, 3, 4).

²⁰ The results of a research program currently underway will provide more detailed information on this subject.

²¹ A pilgrimage is strongly indicated between *Augustonemetum* and the Temple of Mercury (at the summit of the Puy de Dôme). Is there a similar phenomenon at the Mont-Dore site?

²² P. Leveau (2007: 284) discusses the urban forms of curative spas.

The significance of mineral waters in the organisation of the territory can be addressed through the prism of architectural finery. The architectural complexes were part of the monumentalising of the Gallic territories, which demonstrates the importance of mineral waters to the Arverni elite.²³ The chronology of the sites' usage is still to be clarified, especially the phases of abandonment (which is still under study). The evolution of practices can subsequently be approached with greater certainty.

In this way, the study of Arverni balneology – so prominent within the regional historiography – is being re-examined. The exchange of perspectives in this initial collective overview will provide food for thought and open up new avenues of research in the years to come.

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