

The French archaeological mission and Vat Phou : Research on an exceptional historic site in Laos

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The Vat Phou complex [fig. 1] is located in Champasak Province in Southern Laos on the right bank of the Mekong River, 100 km north of the Khone waterfalls which mark the border with Cambodia. It stretches to a sacred mountain, the tip of which has a remarkable shape, identified in antiquity as a *linga*, hence the ancient Sanskrit name Lingaparvata, meaning “*Linga Mountain*”. The existence of a permanent spring flowing from one of the cliffs most certainly inspired the first hinduised sovereigns to build a Shivaite shrine on the site. The most ancient structures were progressively replaced by a monumental religious complex in the classic Khmer style (11th-13th century), built on the hillside [fig. 2]. The pre-Angkorian (5th-7th century) City is in the plain, 5 km to the east on the banks of the Mekong, the ruins of which are mostly visible on aerial photographs. The ancient road connecting Vat Phou to Angkor region is singularly recognizable.

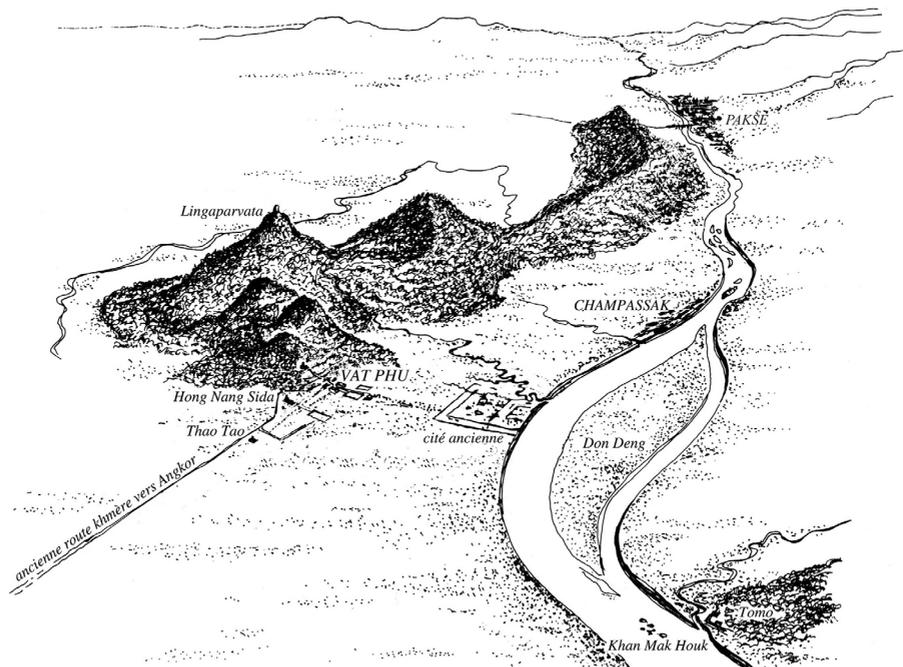


fig. 1: Vat Phou Archaeological area, as seen from the south (drawing P. Pichard)

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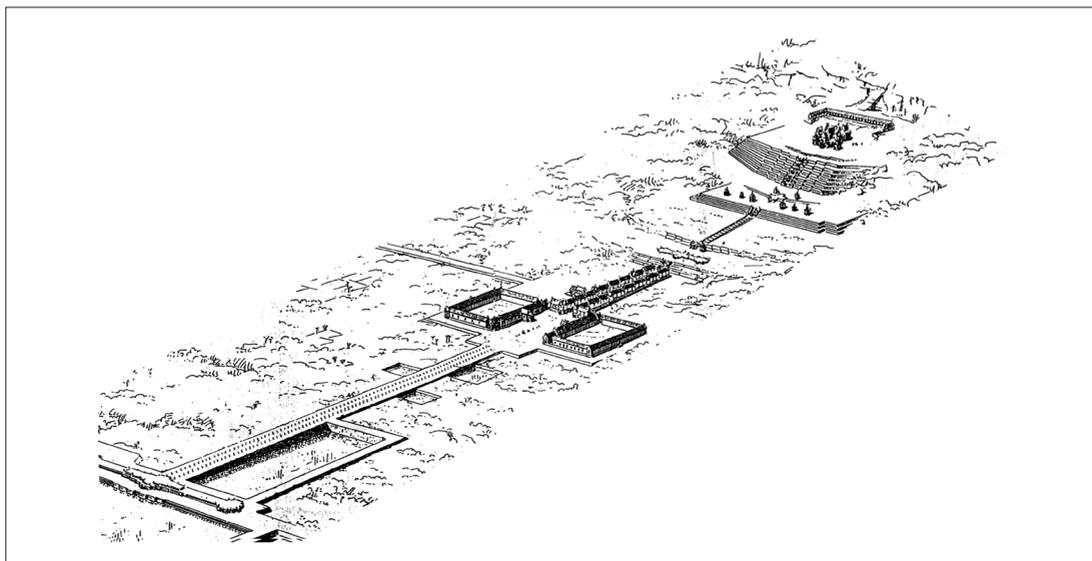


fig. 2: Restitution of the site on the hillside according to Henri Parmentier

It was punctuated by religious buildings and rest houses. Its traces within the present borders of Laos, as noticed by E. Aymonier as early as 1901, were marked on maps in the 1950s. Research on archaeological cartography in part of the lower Mekong basin has recently uncovered remains of this road in Cambodia. The Vat Phou region was indeed an integral part of what was known as the ‘Khmer Empire’, and governed between the 9th and 14th centuries by a central Angkor-based authority. But the origins of this empire are certainly to be found in Champasak, at the foot of Vat Phou, in the city which appears to have been the capital of Chenla, the first Khmer Kingdom.

From 1990 to 1999, the French Archaeological Mission to Laos, funded by the French Ministry of Foreign Affairs and the Guimet Museum conducted, in cooperation with the Division of Archaeology of the Lao PDR Ministry of Information and Culture, a research and training programme known as the ‘Projet de recherche en archéologie lao’, or ‘PRAL’.¹

This work came in continuity with the research French scholars conducted in Vat Phou during the first half of the 20th century.² It advanced the process that culminated in 2001 with the listing of Vat Phou as a UNESCO World Heritage Site. It also laid the groundwork for other technical and scientific partnership projects, notably with Italian and Japanese cooperation agencies concerned with the difficult questions of site renovation and development.

The PRAL was born at about the same time as the major archaeological heritage preservation projects in Cambodia, after a period during which regional historical research had been on hold for two decades. The original objectives were limited in nature, although an understanding of the site’s archaeological value, as well as that of the surrounding areas, rapidly gave way to a larger geographical investigation with a wider vision, of promising perspectives for a complete renaissance of Southern Lao archaeological research.

1. This project was co-directed by Marielle Santoni (CNRS, UMR 9993) and Viengkeo Souksavatdy (Director of Archaeology, Lao Ministry of Information and Culture).

2. Work conducted by such researchers as L. Finot, A. Barth, E. Lunet de Lajonquière, H. Parmentier, H. Marchal and G. Cedès (cf. the Bibliography).

The initial project was in fact centered around the 11th century Khmer temple at the foot of the cliff. Part of the work consisted in verifying whether there might be a prehistoric site beneath the cliff, whilst another part examined the spring behind the sanctuary in order to understand its role in the site's sacralisation. Excavations quickly revealed that if there was a prehistoric settlement on the site, its vestiges had totally disappeared due to the magnitude of the Khmer period architectural projects. Several excavations were thus dedicated to clearing away these structures and to determining the sanctuary's origins. At the same time, excavations and prospections were undertaken in the pre-Angkorian city and the neighbouring areas, to better understand the development of the Hinduised Khmer culture in this part of the Mekong basin.

In this edition we have decided to put emphasis upon the excavations conducted between 1991 and 1995: their results, although published by the Vientiane EFEO in a limited edition (Santoni and Souksavatdy, 1999), have so far remained largely inaccessible. The first and second parts of the following text are mostly taken from that edition: they deal with excavations undertaken around the mountain sanctuary and in some sections of the Ancient City, especially on a pre-Angkorian temple. The results of the work undertaken from 1996 to 1999 were published in detail by the EFEO in 1998 (Santoni and Hawixbrock), in 1999 (Santoni and Hawixbrock) and in 2000 (Hawixbrock). Even though the reader can refer to these texts in their entirety, we present large excerpts of them in the third part of this article. The Conclusions summarize our present evaluation of the importance of Vat Phou in the history of the region during the first millennium.

The “temple of the mountain”

The sanctuary [fig. 3], which is composed of an 11th century sandstone avant-corps and a possibly older brick cella, was built on the upper terrace of seven monumental terraced tiers.³ The north and south sides of the terraces are bordered by two deep ravines; on the eastern side are seven large access stairways while the western side is closed in by a large 62 m-long sandstone portico running from north to south with an eastern return at each end. The portico has two tiers. The western side is a high terrace bordered by a wall to the west and a colonnade to the east, whereas the eastern side, down below, is a large paved traffic area made of several rows of sandstone blocks.

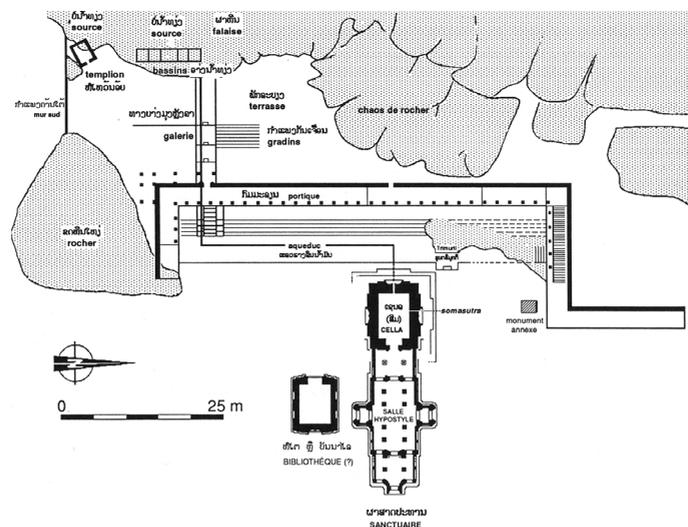


fig. 3: Map of the sanctuary and the spring area

3. For a general description of the monumental complex, please see Parmentier (1914) and Marchal (1957).

We note that the rectangular west-east oriented sanctuary opening to the east, while built along the general lines of the buildings making up the entire religious compound on the plain, is not centered relative to the portico. As a matter of fact, the portico, built after the temple, had to adjust to the ground: on its north side it stands on a large rocky scree whereas to the south it is supported by an enormous boulder overlooking the ravine. This explains why it is so well preserved in those locations, since in the center – where it was erected on landfill from the terrace – water running from the ravine has led to its collapse.

This portico is somehow backed by a 30m-high cliff, at the foot of which lies a partly man-made cavity that forms a quite low (2m-high) shelter. From two cracks in the natural sandstone ceiling drips very pure water that, according to locals, is the only permanent spring in the whole mountain. A narrow and steep triangular zone (24 m east-west by 50 m north-south) spreads between the foot of the cliff and the portico. It is littered with boulders which fell from the mountain. This seemingly empty space was chosen for excavation in 1991 and named the ‘spring area’.

The portico clearly separates this area from the sanctuary terrace area that supports a few other structures, and it makes up the difference in level between the sanctuary terrace and the spring area. There was only one access way from one to the other, located in the south part of the portico: a stairway leads from the lower to the upper level, and to a door in the portico back wall. When the portico was still standing, one could *a priori* not see the spring area, hidden by its wall, from the sanctuary terrace.

Excavations in the spring area were carried out in 1991 and 1992. In 1993 and 1995 they were extended to the portico and the sanctuary terrace on the northern side.

The Sacred Spring

Excavations carried out in 1991 and 1992 behind – meaning ‘west of’ – the sanctuary portico, uncovered an unsuspected architectural complex. It relates to the spring which runs under the shelter at the base of the cliff and it confirms the sacralisation of these waters. These excavations showed that the portico behind the sanctuary did not constitute, as previously believed, the limits of the religious compound. Several architectural refittings were also uncovered which highlighted the importance this place held in the pre-Angkorian period.

The spring area actually forms a compound enclosed by the cliff, the boulders, a small temple and the walls. One enters through a door in the southern part of the portico. The sloping 4m-drop between



fig. 4: Pre-Angkorian decorative plate, sandstone (face under arcature)

the roc shelter and the upper level of the portico was rebuilt several times. It was initially paved with bricks, then later covered with small slabs to form a sort of rising pavement. Finally, large sandstone tiers were built in the 11th or 12th century to hold a terrace for traffic in front of the spring and shelter. Several pre-Angkorian sandstone elements were then reused in the foundation and terrace pavement, notably a fine flat decorative element representing a face under a leafy arcature [fig. 4]. A sandstone and brick wall between two large boulders served as a southern fence.

Under the shelter itself, brick and sandstone basins were installed to collect and drain the sacred water which ran permanently from a crack in the rock. These basins, set up in two symmetrical groups, had a strong brick infrastructure with parallel drains. The bottom was comprised of large thin sandstone slabs, with wear marks left by a wooden gate. These were very possibly only built to sanitise the spring area, the waters of which were collected in a standing washbasin. They were later rebuilt with brick superstructures for containing the water. A group of columns joining the ground to the shelter ceiling, as well as statues and pedestals, were arranged around it.

Another spring runs at the southern end of the shelter, the waters of which were sacralised by a small temple built during the 11th century [fig. 5]. Only the sandstone façade was visible since the back of this structure, in brick, stood under the shelter. The façade and pediment elements (lintel, false floor decorative slab, sloping part of the tympanum, swirls and angle *nāga*), as well as ceremonial objects (pedestal, *liṅga*) were lying on the slope.



fig. 5: The small temple near the source, 11th Century



The lower part of a bronze statue (*Śiva* or *Viṣṇu*) was found under a thick slab covering the back part of this small sanctuary behind which, in a narrow space under the shelter, popular religious devotion brought 12th or 13th century Khmer bronze statues (two *Viṣṇu* and one female divinity [fig. 6]) together with much posterior bronze statues of *Buddha*. A small gold reliquary tube was buried under the base of a wall.

fig. 6: Bronzes Khmer statues found behind the small temple (12th-13th Century)

A monumental sandstone stepped gallery, running west to east, connected the basins with the door in the portico wall [fig. 7]. This gallery was 21 m long, 3 m wide, with a thickness of 1.2 m. It ran up the slope in five or six three-degree central step landings and was covered, as can be seen by the wooden post holes on either side. Its role was also mainly to support and protect an elevated green sandstone aqueduct, comprised of a succession of ‘gutters’ with decorated covers, fitted to one another and resting on the obliquely carved capital of small columns, the tenon bases of which are fitted into regularly spaced mortises on the southern edge of the gallery. This aqueduct brought water from the basins to the portico, and passed through a small opening pierced in the southern jamb of the door. This installation did not survive, only bits and pieces of it have been found.

Soundings in this area have allowed us to not only get an idea of the initial installations and their architectural transformations, but also to uncover elements of contemporary technology: sandstone waste from façade re-dressing, metal slags and crucible fragments indicating that bronze and iron were worked there at that time, most probably for tool repair. A dipping water basin with sharpening marks on its edge, and some nails were also found.

In deeper layers, pre-Angkorian shards bear even more witness to human settlement from that period. In upper layers, many Iranian and Angkorian ceramic shards, Chinese and Vietnamese porcelains, fragments of bronze (a hand with a Chinese style sleeve, a Brahmā head, remains of small pedestals), small statues and ‘Sacred Imprints’ of Buddha, show how highly frequented this place was throughout the ages. Finally, many tile fragments are indicative of the type of roofing and its decoration. It seems that not only was the gallery covered, but that a porch roof also protected the shelter’s façade. Wherever the bedrock was reached, we could note that it was cut to receive monumental buildings, and no prehistoric vestige – if ever there were any, has survived.

Along with sacralisation, as well as collecting and adduction of spring water, this is a previously unsuspected aspect of Vat Phou which was thus uncovered.

From the mountain to the cella.

In 1993 and 1995, excavations dealt with the portico – which was possibly built in the 11th or 12th century – also with the back of the sanctuary and a large part of its northern terrace, in order to uncover the course of the stone aqueduct between its passage point through the portico, via the southern door, and its ending point behind the sanctuary, where a hole drilled in the cella’s western brick wall let the water pass and permanently anoint the *liṅga* which stood inside. The water then exited through the northern wall by a *somasūtra* stone conduit.

A large portion of the portico (fig. 3), which is 62-m long, 12.5 m-wide at foundation level, 3m-high on the south end and more than 6m-high at the north end (the height of the back wall not included), was uncovered. On the western side of the back wall, toward the spring, ran a narrow terrace,

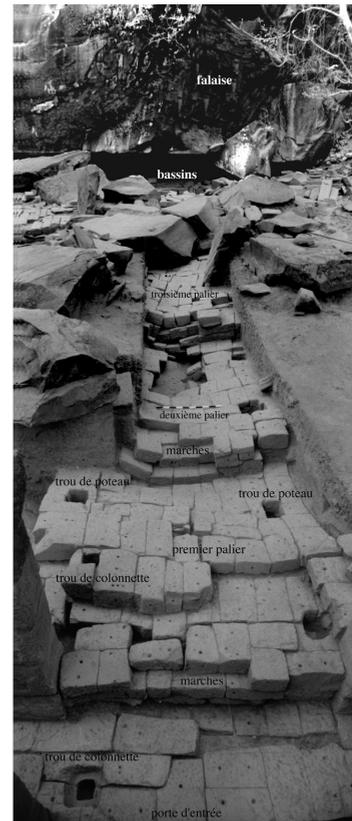


fig.7: Gallery climbing from the portico to the basins

the roof of which was supported by stone pillars. On the eastern side, toward the sanctuary, the portico is organised into two covered terraces: a high one supported by tiers, the roof of which rested on stone pillars, forming the portico itself; and a low one, standing a little above the sanctuary terrace level, side by side with the tiers base, with a doubtlessly lighter roof supported by wooden pillars. These two levels are thus separated by the stepped tiers. The only accesses from one to the other were through a stairway in front of the southern door, and by another stairway cut into the rock along its northern return.

At the base of the lower terrace, under its southern return, a sculpted elephant head appears directly carved in the rock upon which part of the portico was built, as well as what is considered to be a drainage system. The elephant seems to belong to an earlier period. A sounding undertaken below its foot uncovered pre-Angkorian shards.

The aqueduct column mortise holes were followed on the eastern side of the portico. After passing through the back wall, the aqueduct, orthogonal to the higher terrace, went down on the side of the staircase and, reaching the lower terrace, made a 90° turn toward the sanctuary to the north. Reaching the back of the sanctuary it made another 90° angle to the east, in order to bring water to an orifice drilled through the western brick cella wall.

This is proof that the spring water, sacralised at the very outset, was brought to the sanctuary to anoint the idol, most probably a *liṅga*, placed inside the cella. The waters which symbolised the *soma*, or divine elixir, were then collected in the ablution basin, in accordance to the tradition before being brought outside through a stone conduit, the *somasūtra*. The presence of a *somasūtra*, unavoidable during the pre-Angkorian period, is rather exceptional for an Angkor period temple. This brought Henri Parmentier to write (1914: 30) that the brick cella was possibly the vestige of the pre-Angkorian temple mentioned in texts and that only the sandstone nave of the sanctuary dates from the 11th century.

Trenches were opened in 1993 on the north side of the sanctuary terrace across from the *somasūtra* exit, in order to find out if there were any particular arrangements there and to examine the cella foundations. Another goal was to link up with the northern side of the portico, especially at the level of a bas-relief sculpture showing a *Trimūrti* (Brahmā, Viṣṇu, Śiva) carved in the rock. In 1995, complementary work was carried out on the northern end of the portico as well as on part of the terrace to the north of the sanctuary. Two main trenches, one of which was aligned with the *somasūtra*, and three additional trenches were dug in relation to the reopening of part of the 1993 trench.

Study of the portico construction was thus completed, notably in the north part where the upper traffic level is much higher and presents two level breaks. It should also be noted that the Khmer architects integrated blocks of natural rock which had either been conditioned to support the portico base or were incorporated in its construction, sometimes directly cut into the desired shape (a stairway, for example), or finally carved with religious reliefs (elephants, *Trimūrti*). Another access door to the spring was planned in this northern section of the back wall. It seems, however, that it was immediately filled up with bricks, since it is located just across from a torrent coming down the cliff.

The elevation of the back wall, the articulation of the two main platforms, the taking up of the traffic levels, the spacing and layout of columns were all uncovered, as well as the link between the northern limits of the sanctuary terrace and the portico angle.

Clearing off around the base of the boulder decorated with the *Trimūrti* sculpture has shown that the lower terrace widens out there to form a small moulded decorative podium in front of the sculpture. A small stairway placed in the centre leads to the sanctuary's terrace level.

The western and northern sides of the sanctuary have been cleared. Terrace construction stages and methods are recognisable: on an ancient floor of carefully carved boulders, three sandstone pavement levels alternate with brick pavements. This floor was partially taken apart during the rebuilding of the cella.

The terrace was pierced with several post holes. Excavation of some of these allowed us to observe the sanctuary foundations, notably one laterite row resting on a thick layer of pebbles contained by eleven brick rows. These posts could have held the offerings, as in Indian temples. According to another hypothesis, they could have been planted there to support scaffolding during the temple's construction. Whatever the case, some of these holes were carefully filled in with fragments of bricks or of thin sandstone slabs.

Surrounding the *somasūtra*, as well as the aqueduct entrance and actually on each side of the false doors decorating each side of the cella, stood some statues, as was customary. Only their pedestals remain, under which were found – dug in the brick – cavities in which foundations deposits were hidden. One of these cavities still contained a kind of gold flower; another held gold leaves rolled into a cone and semi-precious stones.

Across from the *somasūtra* exit one can observe a slight elevation in the pavement, forming a rounded return to the east. This might point to the course of a lustral waters evacuation conduit leading toward the slope, or at least toward another monument. However, a huge pile of landfill refuse from previous Japanese excavations carried out in 1990, prevented us regretfully from continuing our excavations to the east, to test our hypothesis, which if confirmed, would reveal again an exceptional layout for a Khmer temple.

Further to the north, the terrace forms a small step which could mark a limit. Scattered sandstone vestiges, probably from a destroyed pre-Angkorian temple (parts of a door-jamb, small columns, altar stone, pedestal, decorative elements) were found on the pavement. Up to that point, the existence of this temple was inferred from texts only.

Finally, a small annex construction in brick with sandstone mouldings, encompassing a large boulder and leaving a space forming a kind of corridor, or drain, between its front wall and the infrastructure of the lower platform of the northern return of the portico was uncovered. The entire structure could not be cleared. The sandstone façade is to the north, which suggests a small temple dedicated to Nandin, Śiva's mount (cf. The Nandin Temple below, in the plain to the west of the southern so-called 'palace').

First approaches to the ancient city (1991-1995)

As of 1991, soundings and excavations were undertaken in the Ancient City. These were accompanied by geo-archaeological (complete inventory of Ancient City vestiges) and geophysical prospections, with the help of our Italian and Russian colleagues who were in charge of computerised cartography [fig 8].

The Ancient City does not yet have a name, although it is tempting to call it Liṅgapura or Kurukṣetra, since these were mentioned in the epigraphic texts. It was built on the confluence of the Mekong and the Houay Sa Houa, a river which comes down from the mountain. It is slightly rectangular and is oriented east-west, with outside measurements of 2,300 m by 1,800 m, and is surrounded at least on two sides – south and west – by a double earthen levee forming a 285 m-wide moat. To the north is found the beginning of a return, although this side is now mainly shaped by the Houay Sa Houa.

It is now difficult to say whether the course of the Houay Sa Houa, was, since the inception of the City, partly canalised and meant to serve as a border, since in Thailand, there are several such later cities in which a confluent serves as a boundary; or if the earth levees went all the way to the Mekong and were subsequently simply destroyed by erosion and agriculture. The eastern side of the City is bound by the Mekong. According to the geomorphologist A. Rivolta, the Mekong has substantially eroded its right bank and turned it into a high cliff while the left bank became sandy. In this way, 200 m belonging to the eastern part of the City might have disappeared. In the section revealed by the Mekong, parts of brick structures with their pebbles foundations have appeared. Many vestiges, such as bricks, laterite or sandstone blocks, pedestals, and pieces of statues were found in the riverbed.

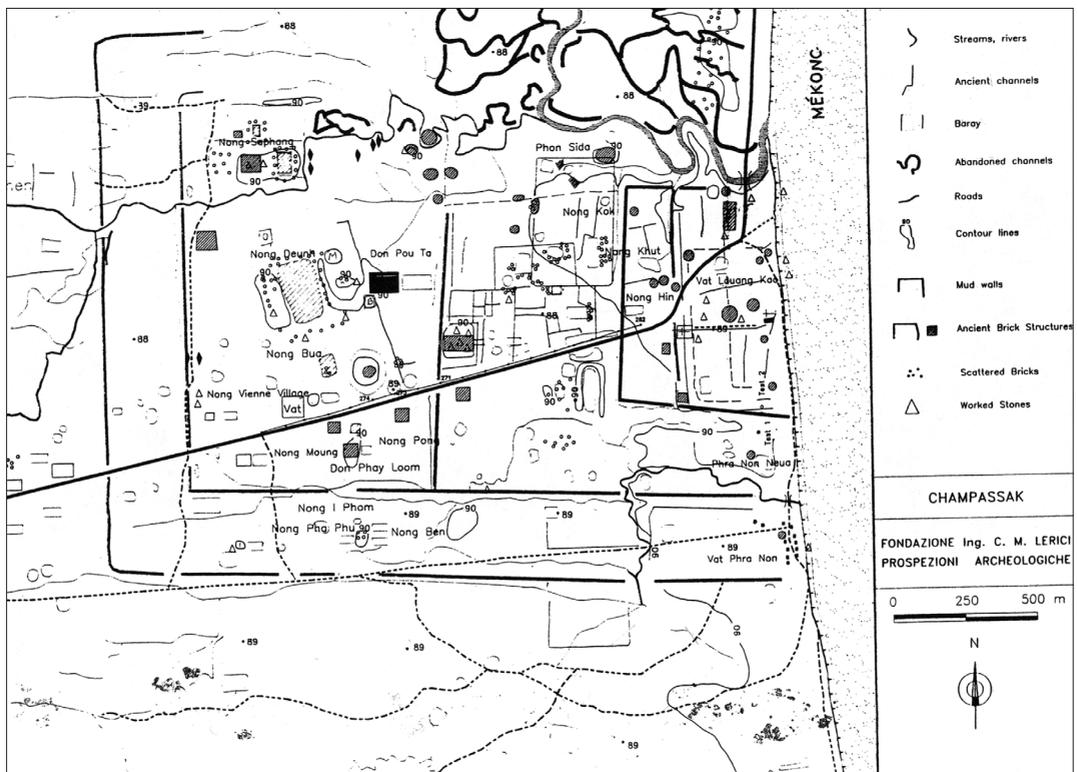


fig. 8: Computer generated map of the Ancient City near Vat Phou

The City was subdivided into two nearly identical parts by a median earthen levee running north-south and parallel to the Mekong. The eastern part includes some more inner enclosures, close to the river bank and partly cut off by erosion. The largest of these is 665 m-long on the western side and a little less on the southern and northern sides, from having been cut by the Mekong. It is a large brick wall built on an ancient earthen levee. This enclosure was doubled on the outside by another earthen levee 25 m distant from the first. Local oral tradition attributes the building of this brick wall to the Cham. Inside at least three other partially brick-covered enclosures are imbricated. They were badly damaged from agriculture and the building of houses.

Many green patches and basins are visible in aerial photographs [fig. 9], which almost always correspond to a monument appearing as a mound of bricks covered by vegetation, and its reservoir. About thirty monuments have been thus recorded, a dozen of which have an eastern basin or reservoir. Two among these monuments show moats.



fig. 9: Aerial view of the Ancient City

Among those vestiges visible on the surface many stone elements deserve mention. Some are architectural elements of monuments, be they door frames, thresholds, half-moon access stairs, entablatures, sculpted lintels – especially a very beautiful lintel of the so-called “first pre-Angkorian style” [fig. 10], canalisations, and small columns. These are often very simple in design and of a style not yet recorded in pre-Angkorian architecture. Others are vestiges of cult furniture: pedestals and statue fragments. A third category is comprised of inscribed steles, three of which were recorded in 1996 and date from the 5th, 6th and 7th centuries.

Many parts of the surface area littered with bricks were also inventoried. Some of these correspond to remains of baking bricks for the monuments. Others could only have been part of inhabited areas. They are often associated with shards and daily implements, such as grinders, footed mortars, pestles, etc.

Finally, much of this area was disturbed since two villages have grown over the Ancient City, one of which is attached to a Catholic church and a mission, with brick and cement urbanisation increasing by the year. The modern road linking Champasak to Vat Phou goes right through the City. All the remaining space is given over to rice agriculture. New roads going through the compounds were established for electricity and an irrigation project. Finally, the mounds have been looted for years for their bricks and to discover and remove gold artefacts from the foundation deposits.



fig. 10: Pre-Angkorian lintel found in a field near Houay Sa Houa 2

Cartographic Programme, Magnetic prospections.

Were they geomorphological or archaeological, there have been extensive prospections in the Ancient City, in 1994 especially. Their goal was to establish the surface hydrographic network, while attempting to separate natural and artificial water channels, be they ancient or new, as well as the *baray*, or reservoirs. They were also intended to identify craft and housing areas, to inventory, locate and measure all visible structures, in particular the monuments – about 30 in all – and their reservoirs – in order to highlight relations between these latter and the distribution of water in the City. Finally, they meant to record all mobile vestiges visible on the surface. Two small test pits were dug in the north-west quarter of the City, one on a water channel and the other in a craftsman area for bricks firing. Both were related to a large monumental ensemble (Souksavady 1999).

These results, taken together with a recent aerial photogrammetric cover, have allowed us to refine considerably the computerised map of the prospected area established by our Italian colleagues.

These associates also undertook magnetic prospections beginning in 1992. In 1995 V. Glazounov, a geophysicist from the Saint-Petersburg Mining Institute joined the team. The 1995 magnetic prospections were analysed with software developed by V. Glazounov and M. Cucarzi with highly satisfactory results: they showed the feasibility of, not only localising brick structures, also calculating the models closest to the observed data, using specific software designed to solve inverse problems. These methods allow us to perform quantitative interpretations of magnetic anomalies and thus evaluate the shape and thickness of buried archaeological vestiges. We can then classify archaeological zones according to the characteristics of these magnetic anomalies.

The magnetic measurements by V. Glazounov and M. Cucarzi on six mounds in the Ancient City (Don Phay Loom, Nong Pha Phou, Phone That, Don Phou Ta, Nong Vienne and Nong Moung) allowed us to define the limits and thicknesses of buried brick monuments. Apparently such high and large mounds, such as Don Phou Ta, can present lesser anomalies than such slightly raised structures as Nong

Vienne. Measurements taken in double-meshed coverage grid on the site known as Houay Sa Houa 2, were confirmed by excavation. Numerous magnetic tests were also conducted on several homogeneous series of bricks from different places and dates in order to establish reference scales and refine future measurements, especially concerning site thickness. A dozen other points which may correspond to living craftsmen quarters have also been examined in the south-west quarter. Verifications carried out in 1996 at Nong Vienne proved this method to be efficient.

The first soundings (1991-1992)

As early as 1991, soundings showed us that occupation of the City was stratigraphically thin (1.2 m) and had at least two levels. Polished axes and cord-marked shards proved the existence of an at least protohistorical occupation. This occupation at the confluence of the Houay Sa Houa and the Mekong Rivers, could not however be extensively excavated since it is now a very densely inhabited area. An initial survey allowed us furthermore to partially discover the archaeological richness of the Ancient City: numerous brick mounds, areas full of shards and vestiges of brick ovens, many domestic stone implements, architectural and cult objects. Notably, two sandstone pedestals bore inscriptions from King Mahendrarman, dating from 590 CE. Professor C. Jacques, who translated them from our stampings (Jacques 1993), informed us that these inscriptions were of a capital importance: they proved that Mahendrarman, the first known king of the first Khmer dynasty, had indeed been there in his father's and family's domain. They also proved that this region was very possibly the dynasty's birthplace, not further south as had been previously believed. We immediately realised that we had uncovered a unique ensemble, dating from a poorly known period, that of the transition between the famous Founan Kingdom and the beginnings of the Khmer Empire. Until this find, we had been only working on conjecture based upon library research, in the quasi-total absence of material vestiges.

The 1992 programme meant to intensify research so as to take advantage of this unique opportunity to excavate a city belonging to such a poorly documented period and associated with such a prestigious religious foundation. Few sites in South East Asia are as well preserved. Unfortunately, modern urbanisation began. An intervention was urgently needed. Excavating the City became an absolute priority to avoid losing these miraculously preserved remains.

In 1992 a series of soundings helped us better understand the inner compound brick wall foundation system. It was built on an earthen levee with the exterior consisting in a brick-paved glacis anchored into the earth by wells filled with broken bricks – unless this was some sort of drainage system. The earthen levee covered an entire earlier settlement, including basins and probably canals. These ancient basins and canals do not appear on the surface, covered as they are nowadays either by rice fields or buildings.

The City's two occupation levels were disturbed by posterior building and pillaging. Out of necessity, we were forced to dig out – thus stopping an ongoing discreet looting – the vestiges of a relatively recent Buddhist edifice at the Houay Sa Houa 1 site, dating at the earliest from the 18th to 19th century. The foundation deposit contained more than two hundred gold, silver, bronze, resin, and gilded wooden statues (Souksavatdy 1997, Hawixbrock 2000). Other than the prestige accruing from this discovery, the reward was to understand how 6th century architectural elements were re-used in later buildings, as evidenced by the pre-Angkorian slab which covered the foundation deposit chamber and drew our attention during the survey. We were also able to observe the damage caused to ancient levels by construction of those recent buildings.

The Houay Sa Houa 2 Site

In 1993 we began excavations at the Houay Sa Houa 2 site, a brick monument associated with the Citrasena-Mahendrarvarman inscriptions, with the dual intent of establishing a stratigraphical link and of dating occupation levels. This dig revealed on one hand that the monument probably antedated the inscriptions, therefore was at least from the 6th century, and possibly even from the 5th. On the other hand it allowed us to observe an as-yet unknown type of building and foundation system. Indeed, colleagues working in Cambodia and Thailand assured us that these buildings could not be Khmer. Such an opinion had to be qualified, however, since to our knowledge no pre-Angkorian monument had been excavated until then. The age of the monument was confirmed by careful study of its decoration, comparable to none in Cambodia. The size of the building (14.5 m on each side) was also unusual. There were a great many ceramic pieces in the ground around the monument. Its foundations went through a more ancient occupation level marked by brick pavement and shards. This monument is but one in a whole group that remains to be excavated.

The importance of these discoveries allowed us to present to the Minister of Agriculture and the Prime Minister a request in 1993 to cease construction of a large permanent irrigation project, in which the Ancient City would have been the 'pilot region'. We were only able to secure a delay, and so salvage surveys and excavations have been conducted there.

The 1993 excavation at Houay Sa Houa 2, in the north east quarter of the City was taken up again in 1995 and 1996 (Santoni 1999). This is a group of at least three associated brick religious monuments, in the confluent zone of the Houay Sa Houa and Mekong rivers. The importance of this area rich in architectural remains is historically bolstered since it is near the place where the City's foundation stele, the famous Devānīka inscription dating from the middle of the 5th century, was discovered (Cœdès 1956).

Monument 1 [fig. 11] was heavily looted, and it was partly levelled by a bulldozer in the 1970s, so that only 2.5 m in height at the most, mainly only the plinth part of the structure, has been preserved. The monument seems to be associated to the two inscribed Nandin statue pedestals. Both were written by Prince Citrasena when he became king upon the death of his father in about 590 CE and took up the royal name Mahendrarvarman. The inscriptions dedicate the Nandin statues to his father, Vīravarman and his paternal uncle Kṛtāntapāśa (K. 1173 and K. 1174).

The western half of the monument and part of the foundations – which were very elaborate with two levels and brick pillars embedded in a pebble layer up to 3.7 m-deep at the building's centre – were cleared away in 1993. Excavations were extended to the entire building in 1995. The monument was built on a square plan with sides of about 14 m with thick double walls surrounding a central space measuring 4.6 x 5.1 m – the cella probably. The eastern face displays a 3.5 x 7 m avant-corps with a narrow stairway accessed through a slightly raised brick paved walkway. The surroundings of the monument are paved with more or less irregularly arranged bricks covered by a gravel and dirt floor which has been littered with bricks and sandstone wastes coming from façade re-dressing, together with an abundance of ceramics. The shards indicate from their position and orientation the rising of the traffic levels around the building.

A band decorated with a bas-relief of small pilasters carved in the brick runs along the outside face of the walls. On the best preserved part of the building a moulding and a recess appear, initiating narrowing of the edifice. Excavations have uncovered, among others, the building method: three different brick layouts in regularly alternating beds with many orientation and level catch-ups. Careful dismantling and

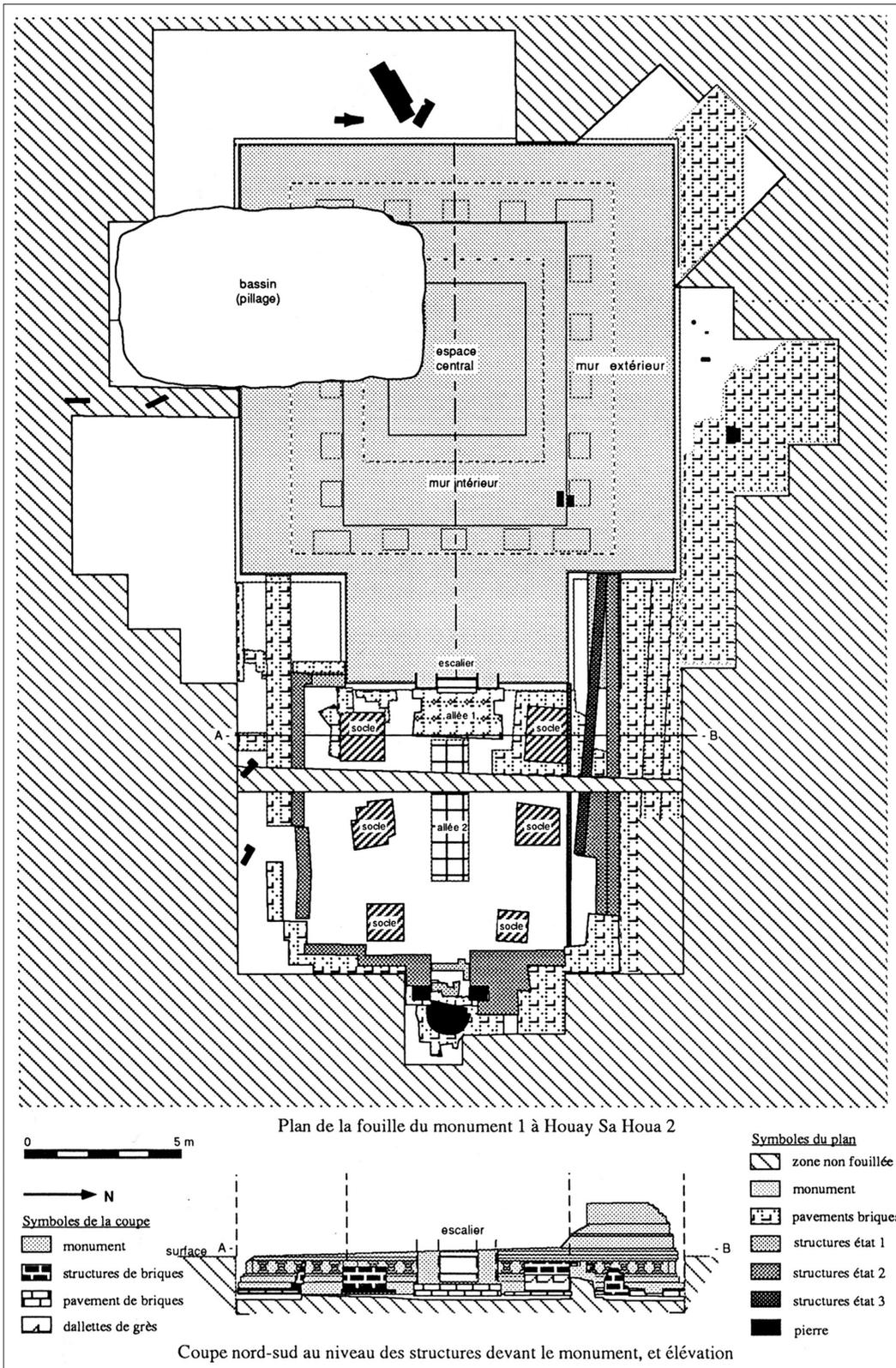


fig. 11: Ancient City, plan of the pre-Angkorian Houay Sa Houa 2 monument

recording of the fallen bricks will possibly allow us to restore the shape, if not the succession of moulding positions.

Finally, some sandstone elements have been found: an entablature decorated with a row of raised square dots and its corresponding pilaster, the top of a crowning piece lotus-bud-shaped, a door threshold, the moulded base of a doorjamb, sandstone small slabs from a staircase, several fragments of thin slabs, a horn-shaped accent piece, probably protruding from the crowning, two fragments of a *somasūtra* or lustral waters drain, L-shaped pieces which were most certainly hooks, and parts of pedestals.

The area in front of the avant-corps, and therefore the entrance, of the building was excavated in 1995 and 1996. It had been subjected to numerous refittings, notably the building of sustaining walls meant to contain landfill creating a 0.80 to 1 m high, 10.5 m wide and 9.5 m long terrace upon which an alley was built. This addition seems to have been made necessary by the building's sinking and possibly a rapid input of sediment during a flood from the nearby Mekong.

Some of these quite poorly built small walls, constructed with different types of re-used bricks, have fallen down and have been repaired. They completely encompass the avant-corps of the monument to the north (from the middle of the northern part of the monument's eastern side), whilst to the south they meet up right at the south-east angle of the avant-corps.

This terrace contains six cubic 'pedestals' sometimes built of brick and sometimes of thin stone slabs, placed on either side of the access alley. These 'pedestals' were possibly used as bases for stone statue pedestals, for probably at least one of the two Nandin statue pedestals. Their foundation rested on the original pavement and their surface touched the upper terrace level. No care was given to construction of those sides unexposed to view. They were probably there from the start, in the form of one or two brick rows, and were raised during repairs.

The most important finds from the 1996 excavations, during which we completed the clearing away of this terrace, started in 1995, were clearly four of these six pedestals, plus the half-moon access step and the string-wall stones. We had already suspected their existence in 1995 from their imprints on the brick pavement in front of the stairs. These stones had simply been displaced to form a new monument entry, 10 m away at the eastern end of the terrace. The traffic pavement continued under the terrace and all around it until it reached the front of the new entry. A small bronze hubbed wheel, pierced on its periphery with riveting holes, was found on the pavement outside the northern wall.

To the south the excavations uncovered the limits and foundations of another monument (number 2), almost entirely torn down. To the north were the first pavement bricks of monument number 3. This monument is visible on the surface in the form of a brick mound comprising some stone elements.

Our monument number 1 lacks any correspondent in the corpus dedicated by Henri Parmentier to primitive Khmer art (1927). It is comparable at best to a small number of edifices all located on the "upper" – in relation to Cambodia – Mekong watercourse: Han Cei, K. Prah That, the group of Sophas, P. Sambok or the That Badom group, which, according to this author in his attempt to find Fou-nan art forms, belong to a 'poor form' (as opposed to a rich form which would develop in classical art). All these buildings are small in size and none are as poor, or at least as simple as this one. If H. Parmentier's hypothesis is correct, this monument could date from the very beginnings of the Khmer period and possibly even from the end of the Fou-nan Kingdom at the end of the 5th and beginning of the 6th centuries. This is not incompatible with the Nandin pedestal dedications, which might have been placed in front of an existing temple.

Also, the simple decorative motives in pilaster on the plinth and in small square dots on the stone entablature (discovered in 1993 in front of the western face), as well as the horn-shaped accent piece strongly resembles the decoration of the first Champa monuments. This would support G. Coëdès's hypothesis (1956) that Devānīka, possibly the City's founder, was a king of Cham origin, since he brought with him the tutelary Cham dynasty cult of the Bhadreśvara *liṅga*. This would also agree with the opinion of several colleagues (B. Dagens, P. Pichard, personal communication) regarding the style of some sculptures, especially on one of the faces under leafed arcade discovered in Vat Phou; and the complexity and elaboration of brick structures and of their foundations which, according to them, are not Khmer. Allusions have also been made to a primitive Javanese style, an unsurprising assertion since a link has long been established between Central Javanese and Champa styles. The Cham were sometimes considered an invading Indonesian population.

Excavations and surface surveys – 1996-1999

The Nong Vienne Excavation

In 1996 and 1998, excavations were carried out on two round structures, each approximately 25 m in diameter and juxtaposed on a north-south axis [fig. 12]. The southern structure was named Monument 1 [fig. 13], and the northern Monument 2. Both structures are massive and built with bricks laid in pairs in header-and-stretcher fashion, on very thick pebbles foundation more than 2.5 m-deep in the centre. Each structure is comprised of an external traffic platform surrounding a raised centre. It is difficult to imagine these to be anything else than two *stūpa* placed side by side.

The site could only be partially studied and another excavation is needed to answer all the questions it raises. In the meanwhile, decorative miniature edifice panels found on Monument 1 could give some indications as to the structure's age. They represent a quite simple building with a barrel vault, its arcade decorated with five large dots, and a crowning reminiscent of the usual lotus bud. The interpretation is, however, not simple since the

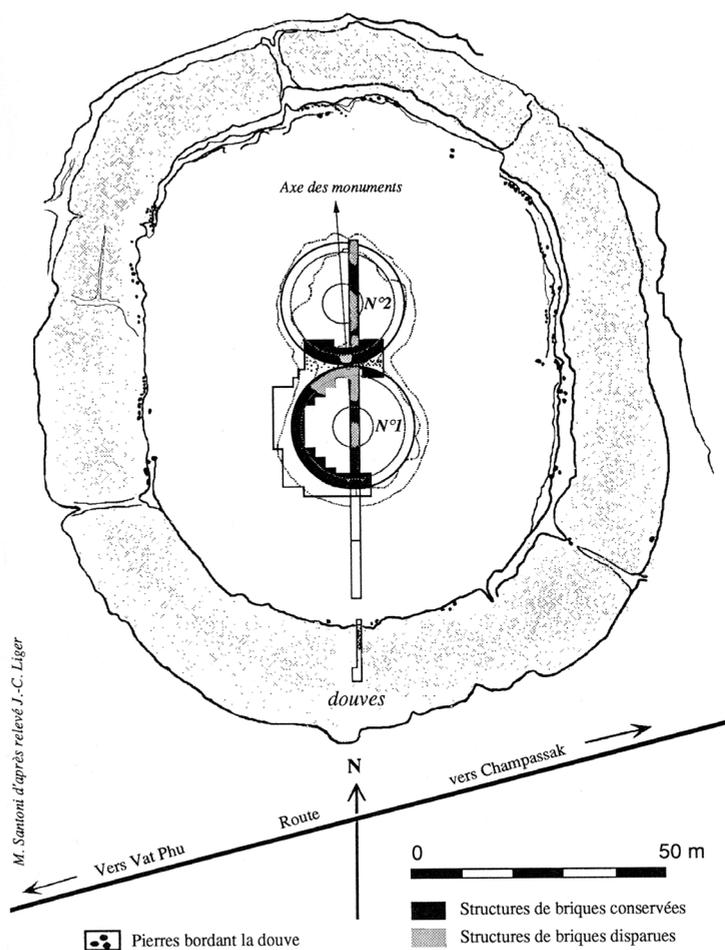


fig. 12: Plan of Nong Vienne site



fig. 13: Nong Vienne, southern monument (n°1) seen from the west

crownings of the three uncovered panels are quite different. The tympanum has a stylised half-flower with long bulging petals. Such motifs can be found on early 7th century buildings at Sambor Prei Kuk, Han Cei, Ampil Rolum and others places in Cambodia. The cover rests upon an out-jutting cornice. The structure's body is simply decorated with pilasters held on top and on the bottom on an out-jutting moulding. The door is very simple, with three dice, as was customary. The three level plinth is quite high and has a central staircase with undecorated string-walls. Taken as a whole, the décor is poor with none of the leaf patterns and whorls so typical of the pre-Angkorian classical style. The bracketted access step found on Monument 2 also seems to be posterior to the half-moon steps so frequent in the Ancient City, although less elaborate than was usual at the height of the pre-Angkorian period.

It seems quite probable that this edifice dates from the beginning of the 7th century, although it could be from an earlier date. The standing Buddha statue in the Champasak Collection could come from this monument or from one of the round structures inventoried during the 1997 geophysical prospections.

No round Buddhist monument from or before the 7th century has yet been discovered in the region even though we know from sparse inscriptions that Buddhism and Hinduism cohabited in South East Asia since the beginning of Indianisation. Chinese annals document that although Buddhism was flourishing during the Fou-nan period, it was supplanted by Hinduism with the emergence of the Chenla (Cœdès 1964, Pelliot 1903).

The twinning of these structures remains a mystery: two *stūpa* thus paired on a single oval platform could be the product of a family foundation, be they spouses or parents. But what of the moats encircling the platform, island-like, normally associated with a Hindu edifice? Finally, one could expect four entries at each cardinal direction in a *stūpa*, or one single entry to the east. The only preserved entrance here, however, is to the south, giving the excavators an initial impression that the western recesses are in fact a false entrance. On the whole, the double Nong Vienne monument is a very surprising structure, especially for a type of Buddhism still close to the Indian model.

Khan Mak Houk

During the first surveys conducted by the PRAL in the Champasak region, we were told by the Vat Phou Monuments Curator of the existence of a carved rock not far from the Ancient City. An initial site visit was conducted in 1995, and in 1998 a more in-depth study became possible. The sculpted rock, known as Khan Mak Houk, is part of a group of rocky outcrops, breaking the Mekong surface during low-water period, at the southern end of Don Deng Island. Khan Mak Houk is the southernmost islet, practically across from the Houay Tomo River which gave its name to the pre-Angkorian Khmer site on its banks. Considering that the Mekong bed moves laterally in the direction of its western bank, these rocks must once have stood in the centre of that river, even though today they are much closer to the eastern bank of the Mekong and to the Houay Tomo River. The long Khan Mak Houk islet is only easily accessible during the dry season on its eastern and north-eastern sides, thanks to shallows in that area. During the rainy season it is covered by several meters of water. When the water is very low, as was the case in 1995, the eastern face is dry and the sand bottom is visible. The north-east face sits in only 50 cm of water, although the western and northern sides are in much deeper water and are surrounded by rapids. This particular situation is certainly the reason why the eastern and north-eastern sides, along with the upper part of the rock, were chosen for sculpting. The bas-reliefs show Brahmanic themes comparable to those sculpted in the Siem Reap riverbed and at Kbal Spean on the Stung Russei, at the Kulen (Boulbet Dagens 1973). Judging from their style, these images can be dated, like those from the first period at Kulen, to the Baphuon period. Parmentier (1913) also mentions a comparable submerged island: Satra Prah Mahus (Number 324 bis), near Thala Borivat in Cambodia.

Lines of *lînga* – now broken – were carved on most of the flat part of the boulder, thus sacralising the Mekong and turning it into a mystic Ganga river. Predominantly Vishnuite themes adorn the east and north east sides of the boulder, such as Viṣṇu sleeping on the *nāga* and the birth of Brahmā [fig. 14]. This association of themes is also present at the Kulen, as well as at Koh Ker and at the mouth of a river not far from Preah Vihear (B. Dagens, personal communication). From left to right on the northern side one can see an ascetic, a fish, a tortoise mounted (?) by a character, followed by a reclining Viṣṇu; the eastern side has a four armed god flanked by two devotees looked at by an elephant, and a god on an elephant between two *dvārapāla*.

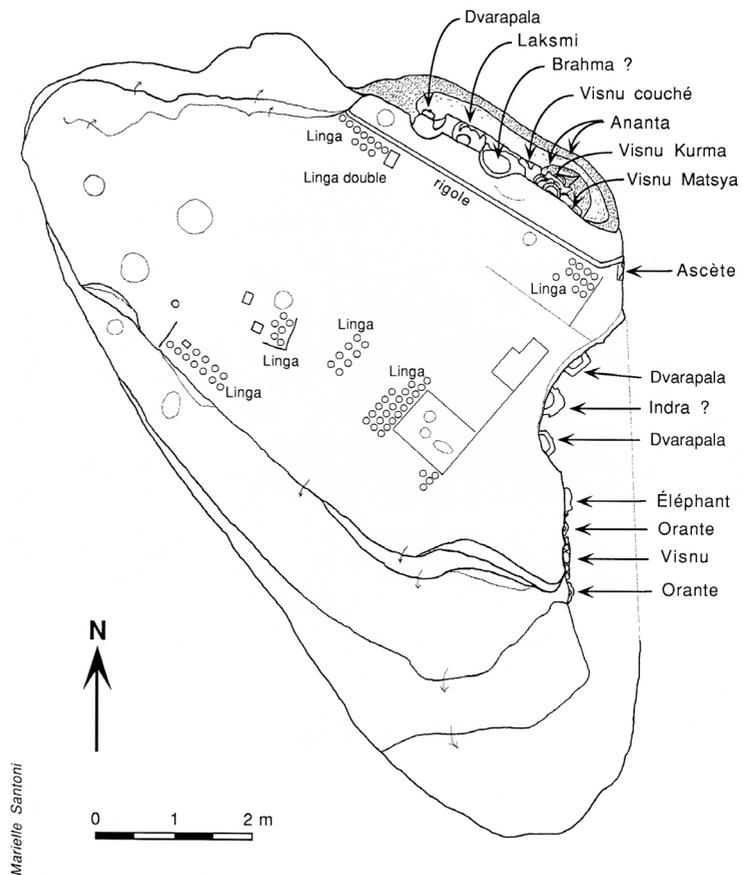


fig. 14: Plan of Khan Mak Houk carved rock

Regional links and hinterland

Given the importance of the discoveries made around the Vat Phou sanctuary and in the Ancient City between 1991 and 1998, further surveys were carried out in 1998-1999 in the southern districts of Champasak Province, on the right bank of the Mekong, in order to explore this previously unstudied territory and to understand its organisation and its role in the network of relations linking the sacred compound to neighbouring regions, Angkor notably.

The region in question is a triangle closed to the west by the Thai border, to the south by the Cambodian border, to the east by the Mekong and to the north by the Houay Khammouane River, the source of which is in the mountain behind Vat Phou and which runs into the Mekong 30 km further south [fig. 15]. At the time of our survey, this region, mostly depopulated due to incessant modern conflicts, had only recently been open to foreigners. Some areas near the borders were still off-limits,

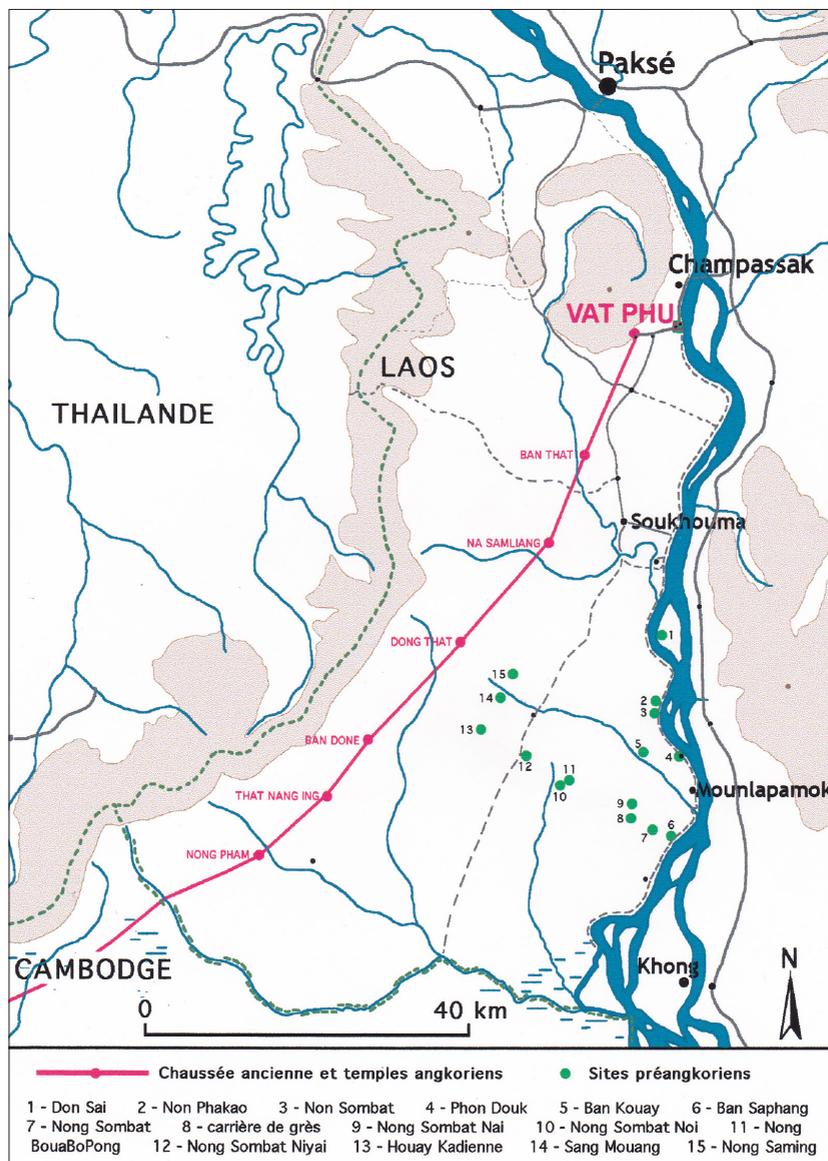


fig. 15: Survey area in Champasak Province, location of sites

especially a large part in the southern zone, due to land mines. No recent maps did exist and the roads shown on two ancient and often inaccurate maps had disappeared. The only accessible track was recent and not yet shown on any map. Most preparation work for the surveys was done using aerial photographs dating from 1952 and 1981, on which the large ancient road leading from Vat Phou to Angkor, the large Khmer reservoirs and the largest of the monumental structures, as well as large enclosures maybe related to ancient housing and, (under the recent agricultural division) some areas of the antique land plots oriented east to west can be seen. Some sites are on the banks of the Mekong, although most are in forests and difficult to reach. We were informed of them either by members of the military or by woodcutters. These sites are almost always flanked by an ancient reservoir which, even small, can be identified from aerial photographs.

Twenty sites in all have been inventoried, fifteen of which carry a monument. They were situated by crossing GPS data, maps and aerial photographs. Each one was registered in the inventory, mapped, photographed and video-recorded. Fifty accessible water pools, ponds and reservoirs were also recorded. Systematic research, however, is needed to determine whether they are ancient and to understand the nature of non-monumental structures to which they belong.

All monumental structures were destroyed to some extent and were dug out by looters looking for foundation deposits. Some still stand, others have collapsed and others were disemboweled and looted with their remains scattered around. After these two seasons of surveys it seems that we can distribute these sites into the following groups:

1. Village temples along the Mekong : That Don Sai, Non Phakao, Non Sombat, Phon Douk, Ban Saphang (Figure 15, numbers 1 to 4 and 6).

The Mekong has long been a source of wealth for those who live along its banks. Modern villages are built on top of ancient ones. Settlement is naturally denser than in the hinterland and spreads out almost continuously along the river banks. Several installations have been recorded, some of which contain one or more brick or laterite sanctuaries with richly sculpted lintels. Most frequently, only the lintels and other sandstone architectural elements such as door frames and steps remain alongwith a few cult furnishings, such a pedestals, *liṅga* or pieces of inscribed steles. Some of these temples were rebuilt, such as Ban That on Don Sai Island rebuilt at the beginning of the 20th century with ancient materials and refashioned into a *stūpa*. Others, such as Non Phakao and Non Sombat at Ban Mai were recently levelled to make way for agriculture, roads or houses. The lintels bearing a single arch with central medallion, with or without a *makara* at the extremities, are of pre-Angkorian style I. Only one small sanctuary, Phon Douk at Ban Veune Khene, has a leafy lintel in the later “Prei Kmeng-Kompong Prah” style, which is currently in the Pakse museum. Among other rare surface vestiges Khmer *peṣanī* grinders and their rollers as well as a few shards associated at Ban Saphang with brick fragments and gravel are found. The isolated presence of a rather rough style *liṅga* found in the rapids across from Don San Island should also be noted. Further to the south, on Don Khong Island, we also found in 1992 the vestiges of a sanctuary with a decorative lintel.

Because only sites on the Mekong have a large number of sculpted lintels of good quality and sanctuaries sometimes built close to each other, we believe that those villages were richer and more populated than those in the hinterland, as is still the case today. For the moment, no Angkorian monument has been found, although minor vestiges confirm that settlement continued throughout the Angkorian period. It is possible that pre-Angkorian temples were used and maintained over a long period of time. This part of the Province was possibly not built up during the Angkorian period.

2. Small laterite pre-Angkorian temples in the hinterland : Ban Kouay, Nong Sombat Nai, Nong Sombat Noi, Nong Sombat Nyai, Houay Kadienne, Nong Saming (Figure 15, numbers 5, 9, 10, 12, 13, 15).

In the hinterland, away from the large roads, five small, very deteriorated and looted structures were discovered. None of them had decorated lintels. On the other hand, three of the five structures had an inscription. This seems to indicate a moderately dense agricultural settlement regrouped in several small villages, characterised by many small ponds. Ban Kouay, with its few traces of occupation (laterite and sandstone blocks), could be such an example.

These are small 7-8 m-long sanctuaries, built of small laterite blocks, to nearly the same module as the bricks in pre-Angkorian sites.⁴ They also contained some sandstone elements, such as door frames, steps of thresholds and, in one case, small columns. The lintels were not found. They could have been removed by looters, although the simple building style suggests that the structure did not have an elaborate decoration. Four of the five temples open to the east and are associated with one or several mid-sized *baray*, the largest of which is also to the east. Nong Sombat Noi temple was unfinished, with undecorated stonework elements. Nong Saming temple is surrounded by a moat. Only Nong Sombat Nyai opens to the west, has a laterite *gopura* enclosure and a *baray* to the north. An inscription fragment indicates that it belongs to the Jayavarman I period, from the 7th century. The Nong Sombat Nai sanctuary had an inscribed stele of an unusually long and narrow shape. It is very difficult to decipher since it was hammered and reinscribed, although it is probably of the same period, or possibly earlier. The fifth temple, Houay Kadienne is the largest and has a main sanctuary as well as an annex sanctuary.⁵ On the two sandstone reveals of the door can be seen a long Sanskrit and Khmer language inscription giving both the temple's foundation date as 18 May, 654 under the reign of Jayavarman I and the name of the temple's founder – a notable living in Kurukṣetra (Claude Jacques, personal communication). This is particularly important since the Ancient City of Vat Phou was known as Kurukṣetra upon its founding by Devānīka in the mid-5th century. This inscription shows on one hand that this name was still used in the 7th century, and on the other that the entire region was still administered at that time by the first 'capital' of Chenla and not by the new capital, Sambor Prei Kuk – Īśānapura. The date given by the inscription is by now the oldest known for the reign of Jayavarman I and allows us to advance the beginning of his reign by three years. Indications about donations of cultivated land, cattle and personnel are given in a long list. A later style, possibly 10th century, *dvārapāla* or kneeling divinity statue was associated with this temple, showing that it was still in use during the Angkorian period. The rather large body was recently broken in two at the hips. The head was sold and the hands have disappeared, making identification impossible. No clothing decoration is present and the *sampot*, which goes down to the knees, is smooth, although the Brahmanic cord is visible. Its posture is unusual since the statue is kneeling, which is only found for the Prajñāpāramitā at the end of the 12th century. This type of structure is very difficult to spot. There probably exist others. Those which have been found indicate homogeneous settlements under Jayavarman I.

4. Laterite beds are abundant all throughout this perimeter, which would explain why temple builders preferred laterite over bricks, though using laterite in brick-like size, whereas later constructions use much larger laterite blocks.

5. Clearing the grounds allowed us to ascertain that although the northern mound was a laterite structure, the southern mound consisted in looting refuses. It was thus probably one temple comprised of a major sanctuary with a minor sanctuary to the north, opening probably to the east, which could have contained the consort of the main idol. The temple seems to have been surrounded by a simple levee of land serving as an enclosure wall.

3. Isolated structures, forest sanctuaries and sandstone quarries: Nong Sombat, Nong Boua Bo Pong and Sang Mouang (Figure 15, numbers 7, 8, 11 and 14).

Sanctuaries are not necessarily monuments. A high mound, which seems man-made and is associated with a *baray*, Nong Sombat or ‘treasure mountain’, was considered as a site. In the hinterland we have found, however, two very interesting sites. The first, Nong Boua Bo Pong, can only be identified by the presence of several *baray*, small mounds and two isolated statue pedestals reflecting a late pre-Angkorian or early Angkorian transition style. This is doubtless an ancient monument-less village. The idols were simply placed under a light shelter, on a mound of earth or a wooden platform. One of these two pedestals was buried in a trench in a small woods, although it seems to have been moved to that location. The second site, Sang Mouang, is a kind of ‘forest sanctuary’: a *linga* ablution basin beautifully carved into a rock emerging from the earth [fig. 16]. Another rock bears a motive we are yet unable to interpret, round depressions linked by a network of small gutters. This site is in a river bend, or rather a torrent, the bed of which is formed by a chaos of sandstone blocks. One of these blocks bears traces of cutting, which would suggest that the site was a quarry and might justify the installation of a small rustic sanctuary. Another – nameless – sandstone quarry, in the middle of present day rice fields, was also uncovered.



fig. 16: *Linga* ablution basin sculpted in an emerging rock at Sang Mouang

4. Temples on the road from Vat Phou to Angkor, along the mountains: Ban That, That Na Samliang, Dong That, That Ban Done, That Nang Ing (Pram Loveng), Nong Pham.

An ancient elevated 10 m-wide and 2-3 m-high road leaves Vat Phou leading after 300 km – first southward then westward – to the Angkor region where it joins a denser road network. This road is clearly visible in aerial photographs taken in the 1950’s. At that time, cartographers were able to partially place this road on maps drawn out in the 1930’s, unfortunately imprecise in places. The section in Lao territory is 100 km long, from Vat Phou to the Cambodian border. This ancient road today coincides in parts with a modern track. It is marked on the whole only by lines of trees, which have grown on it, thus preserving more or less regularly spaced mounds. It has been considerably eroded and would be difficult to spot in the absence of aerial photographs. There are also *baray*, large rectangular reservoirs made by earthworks measuring about 100 x 200 m, at regular intervals. Temples are most likely found near these

hydraulic installations, even though not all *baray* are associated with a sanctuary or are even close to one. Indeed, they are sometimes as far distant as 1 km.

15 km south of Vat Phou lies the first relay, Ban That, a group of three sandstone unfinished sanctuary towers aligned on a raised platform. Until recently this was the only known monument on this road (Finot 1912). We have been able to identify at least five others along this ancient road, 6-19 km apart from one other: That Na Samliang,⁶ Dong That, That Ban Done, That Nang Ing or Pram Loveng, and Nong Pham at Ban Vienne. It should be noted that there could also have been smaller sanctuaries, built of perishable materials and raised on a simple earthen mound, which may therefore have disappeared. For fear of landmines, we were unable to systematically explore the entire ancient road.

These five recently discovered temples were all built on the same model, with some minor differences [fig. 17]: a laterite nearly square crested wall of about 30 m on each side, opening on the east with a *gopura*, surrounding a complex comprised of a sanctuary-tower with a square base about 6 m-large, four-false floors, a triple false door and eastern entry and two west-facing rectangular “libraries” on either side of the entrance. The tower is always made of bricks, with sandstone door frames and lintels. The tower rests on a sandstone base and laterite substructure. Access to the real or false doors is through staircases which have either disappeared or been buried, and sandstone bracketted access steps – be they decorated (sometimes only with outlines as at Dong That), or not as at Ban Done.

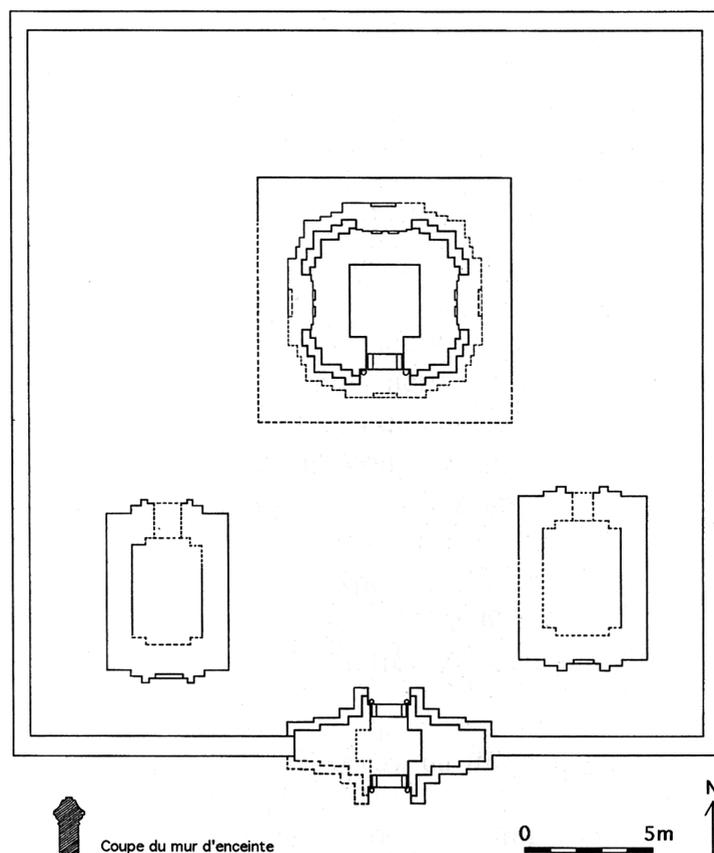


fig. 17: Plan of That Na Samliang temple

6. Probably the That Non Phok mentioned by Parmentier (1913, p. 50: number 337 b.).

Variations in the model are found in the different degrees to which sandstone had been used in building the tower. Sometimes it is only used in the door and false doors lintels, as at Nong Pham, the southernmost temple, or also for the wall base, doorjambs, capital and door small columns, as at Ban Done. At other times it is also used for false doors, as at Dong That and Na Samliang or even also for cornices as at Dong That. Library walls can be in laterite or brick, although the cover is always brick. The *gopura* base is sometimes in sandstone.

The laterite encircling wall is always surrounded by a moat bordered by earth levees. The rectangular *baray* associated with the temple is to its east, and usually no less than 100 m-long except maybe at Nong Pham. Other smaller waterponds are often associated – and an entire religious complex can be included in an even larger 300-500 m long earthen enclosure, which may have been that of a domain. In the case of Ban Done, the nearby river served as a sandstone quarry.

Another joint and important point is that none of these temples were ever completed, at least in their decoration. At times the pediments, bases and cornices were barely begun, either still corbelling out or already cut to an oblique. In the best cases, the mouldings had been cut but bore no sculpted decoration. At Ban Done and Na Samliang the beginning of a leaf and flame decoration can be seen on the tympanum frame. The false doors are undecorated, as are the octagonal columns. As far as can be judged from the fallen stone elements, the lintels were also left in an unrefined state. However all these temples, dedicated to Śiva were used – as can be inferred from the Angkorian style *linga* pedestals.

The presence of the outer walls and “libraries”, the shape of the false floors and the style of cult objects points to the Angkorian period, probably to the 10th century. It is possible that at least Dong That had replaced a pre-Angkorian sanctuary since a pre-Angkorian column was found there. Only That Nang Ing temple⁷ seems slightly different in that its brick mouldings are very delicate, the lintel and tympanum decoration was already begun with reserve spaces, the classic Angkorian octagonal column decorations had been finished and later on, a clumsy *avant-corps* had been added on. Moreover, it presents an anomaly in the regular spacing of the stopping places, being 6 km from the one before and 12 km from the next. If this were not taken into account, the distance separating the four other temples would be a regular 18 to 19 km stage. That Nang Ing could be the remodelling of a previous foundation or a foundation on a particularly important village. Actually, traces of ancient agricultural plots were identified on aerial photographs and *baray*, including the famous ‘five compartments’, are quite numerous in this area.

This rapid temple construction, almost all on the same model, their spacing along the road and their unfinished state all seem to point to a political willingness – which could maybe not be upheld – to link Angkor to Vat Phou. After the province was if not forgotten at least neglected, this site regained its reputation as the cradle of the first Royal Khmer dynasty. It was a way for the Angkor rulers to legitimate their authority over the entire kingdom which encompassed at that time Cambodia, a large part of north-eastern Thailand and southern Laos.

The density of pre-Angkorian settlement in this zone remains to be established: was it simply low or was it obliterated by the Angkorian occupation? Does the presence of *baray* not far from temples and at any case all along the road imply a population expansion or an agricultural intensification during the Angkorian period? Is it possible they were dug merely for the comfort of travellers?

7. This is certainly the Prasat Pram Loveng (‘five compartments tower’ in Khmer) mentioned by E. Aymonier as early as 1901 (*Le Cambodge*, vol. 2. Paris, Leroux, p. 181) and which can be found under two different numbers in E. Lunet de Lajonquière’s *Inventaire descriptif des monuments du Cambodge* (Volume 2, Paris, 1907, p. 61, number 325 and p. 73, number 337), although its place was uncertain and its imprecise, second-hand description did not allow to recognise it. We were able to identify it at That Nang Ing by spotting the nearby north-south oriented ‘five ponds’ described in the Inventory: in Lao they are known as Ha Hong, ‘five ponds’.

The distribution of reservoirs must still be studied all along the survey area. The largest, which measure 100-200 m, seem to have some relation to the roads. It thus seems that there was also an east-west transversal road from the Mekong to the mountains connecting with the Vat Phou-Angkor road. The mid-sized ones, 50-100 m, are often directly associated with temples, but they can also belong to an ancient village. The smaller ones, smaller than 50 m, of which there are many, possibly correspond to small groups of isolated homesteads, be they ancient or modern.

CONCLUSION

Archaeological and epigraphic studies proved the great antiquity of the Vat Phou religious complex, as well as continuity in its occupation. Sacralisation of the site can be explained by an exceptional physical configuration – the presence of a natural *līnga* topping the mountain – and is also due to the existence of a spring at the foot of the cliff, the waters of which people were able to collect early on and ingeniously bring to the original sanctuary.

Recent research also tends to indicate the importance to the history of the lower Mekong basin of the Ancient City which is today buried and partly eroded by the Mekong, over which the Sacred Mountain stood. Be it called Kurukṣetra and/or Liṅgapura, it seems to have been the first capital of the Chenla Khmer Kingdom, and the birthplace of the dynasty founded by Mahendravarman at the end of the 6th century. Its occupation by an Hinduised society, however, has been attested to since at least the end of the 5th century, as can be seen in the Devānīka Stele. The City is certainly even more ancient, as it contains traces of a protohistoric site: large cities do not mushroom out of nowhere. In fact, it is most probable that it is one of the first great urban structures, succeeding the round moated villages of the initial local organised societies. It could demonstrate the evolution from poorly hierarchised agricultural communities to a city and help to further our understanding of the initial impulse of the Southeast Asian urban revolution. The pre-Angkorian Vat Phou city was short-lived since the power centre shifted quickly to the south. Nevertheless, its development was feverish, more than thirty sanctuaries have been found within its walls. Some of these, such as the Nong Vienne ‘double *stūpa*’, seem to point to a very ancient and original practice of Buddhism.

The entire province to the south of Vat Phou also seems to have experienced massive development, especially under the reign of Jayavarman I. Throughout the 7th century, relations with the new capital at Sambor Prei Kuk (Īśānapura) were certainly strongly ongoing. In the 8th century, a troubled time with possible foreign domination, the province seems to have been left to its own devices. It is only after the foundation of Angkor in the 9th century and the consolidation of royal Khmer power that relations were re-established, thanks to a strong political willingness to link the new emerging empire with its birthplace in Vat Phou, in a bid to legitimise it. Purely economic or at least commercial considerations would not have been sufficient to justify the building of such a large road, with temple way stations, especially since the Mekong itself was the main traffic route. This road also goes through a rather barren and difficult to irrigate, and possibly underpopulated area. Be it due to a lack of means or to a change in policy orientation or to negligence, the temples never received their finishing touches.

Recent excavations and surveys have at any rate uncovered a large number of new elements, shedding light on a period which until now was documented only from ancient Chinese sources. In addition to information about history, art and architecture, continued research in southern Laos will doubtlessly uncover essential data on the first organised and urbanised communities in the lower Mekong basin as well as on the modifications made to the environment by agricultural activities and the development of the water distribution networks, so essential to the future Khmer Empire.

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