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Aline Tenu

► **To cite this version:**

Aline Tenu. Kunara, a 4000 year-old city in Kurdistan. Proceedings of the 3rd International Scientific Conference Archaeology and Heritage of Kurdistan, April 29th & 30th, 2019, Erbil, pp.592-611, 2019. halshs-03081082

HAL Id: halshs-03081082

<https://shs.hal.science/halshs-03081082>

Submitted on 25 Aug 2022

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Kunara, a 4000 year-old city in Kurdistan

Aline Tenu*

Kunara is located about ten kilometres from Souleymaniyeh in the foothills of the Zagros Mountains, at an altitude of more than 700m (Fig. 1). The site covers about 10 ha and has an upper town to the west and a lower town to the east. It is situated on the right bank of one of the arms of the Tanjaro, a perennial river in the Upper Tiger Basin. Indeed, today, it joins in the Derband i-Khan dam lake, the Sirwan with which it forms the Diyala. Tanjaro flows between two chains of the Zagros foothills, Baranand to the south and Mount Azmar to the north. Parallel to the latter and dominating the plain, the Peramagron rises to more than 2600 m. It is the one who gave his name to the mission.

The foothills of the Zagros where Kunara is located show specific conditions with very limited traffic due to the presence of pass that lead to Mesopotamia to the west and to Iran to the east.

In September 2010, a first exploratory mission was organised in response to a request from the Kurdish Ministry of Municipalities and Tourism to contribute to the archaeological map of Kurdistan. The excellent welcome of the local authorities combined with the scientific curiosity to explore an almost unknown region, all supported by a general impulse of new field programmes, led Christine Kepinski(CNRS, UMR 7041 Archaeologies and Sciences of Antiquity, Nanterre) to create the French Archaeological Project in Peramagron in 2011. In 2011, the first field mission was devoted to a survey, the Tanjaro Survey, that allowed Kunara to be chosen to carry out excavations (Kepinski 2014; Tenu 2018a).

In 2012, before starting excavations, Christophe Benech carried out a geophysical survey on the lower town. Four main structures appeared on the magnetic map. To the north was a polygonal structure more recent than a second building located to the south. This building, much larger, measures at least 60 m by 30 m. It seems to be divided into two main blocks organised around two courtyards, measuring ca. 400 m² to the south and 500 m² to the north. The parallel lines appearing on the magnetic map may reveal rows of rooms. To the south, two other structures with different orientations were visible. The black dots may correspond to buildings built with baked bricks or edifices heavily burnt (Kepinski *et al.*, 2015, p. 61-63).

* National Centre for Scientific Research, Laboratory Archaeologies and Sciences of Antiquity, team History and Archaeology of the Cuneiform World, Nanterre, France aline.tenu@cnrs.fr.

Since 2012, six excavations have led to the discovery of remains of buildings, fine ceramic

AREAS A AND D (2012-2013)

In 2012-2013, Area A and D were excavated. Originally, it was a residential area with pottery associated with the site (levels 3 and 2) erected

We uncovered only a few remains. The plan of both sites shows the walls significant of a courtyard. It consists of a length of 10 m. (Kepinski 2015, p. 67-69, Kepinski 2018)

The most recent buildings were unknown. This extension perhaps dating back to the 2nd millennium BC

In 2013, we opened the remains of an industrial area between the upper and lower towns (Kepinski 2014, p. 15-16; Kepinski 2018). The oldest one in Kunara covering flake extension morphology stems from technical skill. No remains were not easy to identify (Tenu, 2018b, 2018c).

The fauna of Area A and D (PhD student, University of Nanterre) identified a great diversity of animal remains

¹² The results of the 2013 excavations

Since 2012, six excavation campaigns have been carried out on 5 areas (Fig. 2). They have led to the discovery of remains mainly dating to the last centuries of the 3rd millennium, with monumental buildings, fine ceramics, lithic, sigillographic and epigraphic material.

AREAS A AND D (2012-2013)¹²

In 2012-2013, Area A was opened in the upper town, under the direction of Christine Kepinski. Originally, it was a stratigraphic trench (Fig. 3) aimed to define a stratigraphic sequence for the pottery associated with radiocarbon dates. It revealed the existence of two successive buildings (levels 3 and 2) erected on the top of a platform at least 3.5 m high.

We uncovered only a limited part of a large courtyard at least 100 m² and of one room to the north. The plan of both successive buildings underwent only minor changes over time, but the thickness of the walls significantly increased to 2.80 m. One pipe system allows rainwater drainage from the courtyard. It consisted of terracotta tubes nested within one another and has been found preserved to a length of 10 m (Kepinski & Tenu, 2014, p. 8-10; Kepinski & Tenu, 2016, p. 150-151; Kepinski *et al.*, 2015, p. 67-69, Kepinski 2018).

The most recent building was then deliberately filled (level 1); the date and reasons for this filling are unknown. This extensive work was probably carried out for the erection of massive structures, perhaps dating back to the Iron Age.

In 2013, we opened two trenches (D₁ and D₂) on the slope of the lower town in order to search for the remains of an ancient defensive system and in area D₁, to study the stratigraphic relationship between the upper and lower towns. Both trenches revealed domestic quarters (Kepinski & Tenu, 2014, p. 15-16; Kepinski & Tenu, 2016, p. 150-156). The lowest level (level 4) in area D₁ might be the oldest one in Kunara, perhaps the mid-3rd Millennium BC. A leaf-shaped arrowhead with little thin covering flakes extracted by percussion from the upper and lower face to obtain an amygdaloidal morphology stems from this level (Marchand, in press). This artefact shows a very high level of technical skill. No rampart has been discovered so far in Kunara, but the ancient limits of the site are not easy to identify. Indeed its surroundings are intensely cultivated, and new houses are built each year (Tenu, 2018b, p. 654-655).

The fauna of Area D has not yet been studied, but all that of Area A was treated by Michaël Seigle (PhD student, University Lumière Lyon 2) in 2018 (See Seigle in Tenu (ed.) in preparation). He has identified a great diversity of taxa. Of the 22 species recorded on Area A, the vast majority consist of

¹²The results of the 2012 and 2013 in Kunara are presented in Tenu & Kepinski, 2016.

domestic species, mainly goats, pigs and oxen. On the latter two, he noticed many traces of cuts that show a choice consumption with tender and abundant meats. Area A also delivered donkey and horse remains. The wildlife fauna is varied: wild goats (*Capra aegagrus*), mouflon (*Ovis cf orientalis*), gazelle (*Gazella gazella*), red deer (*Cervus elaphus*) and fallow deer *Dama mesopotamica*, red fox (*Vulpes vulpes*) and Rüpell's fox (*Vulpes cf rueppelli*), Brown bear (*Ursus arctos*) and Leopard (*Panthera pardus*), among others.

EXCAVATIONS SINCE 2015: AREAS B, C AND E

Since 2015, excavations have focused on 3 areas in the lower town. The remains they conveyed belong tentatively to 4 main phases of occupation, very unevenly documented. This phasing is still provisional and needs to be refined.

Phases 1 and 2

Phase 1, the most recent, dates back to the Iron Age.¹⁹ It was detected on Area C only thanks to the pottery (Sarmiento Castillo *in* Tenu (ed.) 2018, p. 25 and Verdellet *in* Tenu (ed.) 2018, p. 51-52) discovered on a poorly preserved floor level. The Iron Age is not a hapax in Kunara, as far as sherds from the Iron Age had been collected during the 2011 survey. A radiocarbon C14 dating from the upper town confirms the occupation of the site on that period. Unfortunately, due to the meagre remains discovered, it is difficult to go any further, although it is tempting to make the link with the descriptions of the region made in the annals of the Assyrian king Aššurnasirpal II (883-859).²⁰

Phase 2 is significantly older and would go back to the extreme end of the 3rd millennium B.C. It has been identified on Areas B and C. No stratigraphic relationship between the two Areas exists for the moment, but the architectural structures show the same orientation, the same type of construction and the ceramic material studied by Cécile Verdellet (PhD student, University Paris 1 – Panthéon-Sorbonne) (Verdellet 2018) presents obvious affinities. Only one floor discovered in 2015 (US 161, Area B) was preserved. The pottery discovered there confirmed our first hypotheses of dating. This level is very eroded and no superstructure was still present. Nevertheless, Areas B and C may have been included in the same urban program with a regular plan.

Phase 3

Phase 3 is the best known because it is documented on Areas B, C and E. It is dated around 2200-2100 B.C.

¹⁹ A medieval grave (513) dated to the 13th century A.D. has been found in 2015, but it is not connected to architectural structures (Ouraghi *in* Tenu (ed.) 2016, p. 133-135).

²⁰ See for instance Grayson 1991, p. 148-204. See also Tenu 2018a, p. 100-104.

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Area B

Area B was implemented in 2012 to explore the large building revealed by the geomagnetic survey, under my supervision. Unexpectedly, excavations in 2015 indicate that the architectural remains of Area B do not belong to a single edifice, but to four different structures, organised in an orthogonal layout and separated by passageways covered with pebbles (Fig. 4).

Building B. 713, to the north-east, is composed of at least two rooms (146 and 169). To the west, a third one (172) was delimited by two walls (173 and 174), only one course high and one row wide. It has been only partly excavated but it could have been a temporary shelter, constructed against the building proper. The external walls of B. 713 were 1.10 m in width, and built with earth²¹ on stone footings. Sherds of broken pots covered the floors of the two rooms (146 and 169). A fragmentary animal figurine was also found in Room 146 (Fig. 5).

The building B. 715 is almost completely unknown, only its north-eastern corner has been found. The excavation of the building B. 714 started in 2018. It measures at least 15 m long. It is crossed by a drain (729), the discharge of which leads to the interruption of a ramp (119). This ramp, 8.30 m long and 1.50 m wide gives access to the main building B. 712.

B. 712 measures 40 m de long by at least 25 m wide. Its westward extension remains unknown, whereas its main façade faces east. Two elements support this hypothesis, in addition to the access via the ramp 119. Firstly, a low bench-like structure is clearly associated with this façade because it does not run along the perpendicular wall. In addition, the entrance is marked by a very large monolithic threshold more than 1.70 m long.

The plan of the building is largely unknown. It was organised around a courtyard at least 27 m long surrounded by a unique row of rooms organised in two different sectors. To the north, no partition wall has been uncovered. The area was thus largely open and three passages gave access to the central court. To the south, entry through a chicane room (194) was easy to control. A small room (164) located to the south with a bench and a *tannur* was probably designed to accommodate guards.

The pottery found in the building was mainly devoted to food consumption and for reception such as carinated bowls²² but we also discovered cooking pots probably linked to these activities. Fragmentary moulds used to cast bronze blades as well as well-polished tools and numerous lithic

²¹ The identification of the technique used for earthen architecture is still a much-debated subject. See for instance, Pereffo 2015.

²² For this specific shape, see Schmidt, 2014. See also Tenu in press fig. 06.

artefacts²³ show that the rooms around the courtyard may have been devoted to craft activities (Tenu (ed.)2018, fig. 14).

About half of the faunal remains in Area B has been studied by Michaël Seigle. The overwhelming majority of them belong to domestic taxa, including the dog that was probably eaten, the horse and the hen. These two domestic species are still very rare in Mesopotamia at that time. Wildlife is also present with, among others, wild goat (*Capra aegagrus*), gazelle (*Gazella gazella*), wild boar (*Sus scrofa*), brown bear (*Ursus arctos*) and Striped hyena (*Hyaena hyaena*). A sea shell was collected from a beach in the Persian Gulf.

The buildings on Area B were built at the same time on the basis of a preconceived town planning. All the main walls excavated so far are bounded. The exterior wall of Building B. 712 is 1.60 m thick. It is built with a stone footing on which a solid earth superstructure has been built, with at least two identifiable techniques: layers (Fig. 6) and kinds of "loaves of earth"²⁴. The use of two techniques is intriguing; it could correspond to different teams with different constructive traditions. This area shows a huge architectural and urban planning program, which attests to the skills of architects and masons who had to adapt to the irregular terrain of the lower town that already existed by the end of the 3rd millennium.

Until 2017, the buildings appeared to have been gradually abandoned, but in 2018 a destruction layer by fire was discovered. The latter has an interesting parallel with the other areas.

Area C

Area C was also opened in 2012. It was directed by Nordine Ouraghi (Eveha International) (2012-2015), then David Sarmiento-Castillo (PhD student, University Paris 1 - Panthéon-Sorbonne, 2016 and 2017) and finally Barbara Chiti (PhD student, University Paris 1 - Panthéon-Sorbonne) in 2018.

The architectural remains of Area C in Phase 3 belong to a complex that was accessed by a staircase to the east. This staircase gave access to external floors and to two groups of buildings, destroyed by a violent fire:

- to the north two adjoining buildings (B. 517 and B. 279).
- to the south a half-buried cellar composed by 6 rooms (B. 519).

²³ It is on site B that the greatest number of lithic objects were found (see Marchand, *in press*).

²⁴ The "loaves of earth" correspond to earth modules used when still wet, contrary to the mudbricks which are first sundried (see Perello in Tenu (ed.) 2016, p. 139, note 13).

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To the east, building B. 517 is perhaps the oldest (the chronology is still subject to debate), with 4 rooms and a kind of basin covered with terracotta tiles (Fig. 7). It delivered an enormous quantity of ceramic material with curious shapes: simple and double ram-shaped spouts, scorpion and snake decorations, small globular pots with handles, internal handles basins.²⁵

A sealing (M. 570) showing the imprint of a canvas and a rope as well as a jar sealing (M. 223) were found. The latter displays a mythological contest scene with three groups of standing figures and can be ascribed to the end of the Akkadian period. In the largest room (L. 516) located to the north, we found a burnt clay cupule that shows similarities with a structure of the neighbouring building, B. 279. Three entries gave access to the eastern building B. 279, which is only one room (L. 277), about 90 m². In the centre, a structure (US 537) made with layers of burnt clay showed several "cupules" of different sizes. Almost no pottery has been found in this space.

The 6 rooms of the half buried cellar (B. 519) have been excavated. To the north, walls were still 1.50 m high and the vault ceiling was still partly standing. In places, the ground floor above this sunken structure was covered with baked bricks which fell into the rooms below when the building was destroyed by the fire. We found huge quantities of pottery scattered on the floors: storage jars but also middle and fine ware, as well as strainers.

Tablets were discovered in four rooms with a very large majority in the southwest room (L. 505) that is probably the centre of the archive. So far, 116 inventory numbers have been given, but each number does not correspond with certainty to a single tablet. Indeed the tablets are very badly preserved: some of them shattered into pieces, in other cases, only the core – without the writing surface – has survived. The cleaning, even before the first readings, is very meticulous and very long. Even when signs are no longer preserved, the fine clay of the tablets can be distinguished from the surrounding sediment that results from the degradation of the building.

The texts studied by Philippe Clancier (University Paris 1 – Panthéon-Sorbonne) assisted by Julien Monerie (University Paris 1 – Panthéon-Sorbonne), are written in Akkadian. They belong to an administrative archive we called the "flour office." That office recorded entries and deliveries of 8 different kinds of flour. The flour was probably produced in the immediate surrounding area of Kunara and the names of at least 16 towns or villages are attested (but unfortunately not the ancient name of Kunara itself). 6 anthroponyms are now identified, unfortunately poorly preserved. Three of them may have been Akkadian. Several tablets are lenticular. They all stem from the same room,

²⁵See Verdellet in Tenu (ed.), *In press*; in Tenu (ed.), *In preparation*; Tenu, *In press*, fig. 8.

L. 505 and may have had a role in the archival practice. Entries and deliveries tablets were found mixed, without obvious classification scheme.

In 2017, two tablets (M. 515 and M. 517) provided the first political title in Kunara: *ensi*₂. It reveals the Kunara's important position, but the term is ambiguous and the exact status of Kunara is still unknown. M. 517 gives a second title: *Sukkal*, a very high official, probably subordinate to the authority of the *ensi*₂. At last, the tablet M. 225 found in 2015 records a flour entry made by a man, who was likely a vassal of the Kunara *ensi*₂. Kunara was thus a regional centre with a centralized administration (see Clancier, Monerie & Tenu in Tenu (ed.) in press).

To the west of Area C, a complex network of stone drains was found in 2018. Basin 577 was connected to it. A zoomorphic vase in the shape of a fish was found in one of them (Fig. 8). In Area C, more than 98% of the fauna is domestic, and appears mainly as a food supplement.²⁶

For the time being, the relative chronology and function of the buildings of Area C remain uncertain. Were they designed for artisanal or ceremonial activities? The existence of two earth structures with cupules, and the comparable proportions of the rooms that house them, as well as the large number of non-functional ceramic shapes support this hypothesis.

Area E

Area E, located to the north of the lower town, has been excavated since 2015 under the direction of Florine Marchand (PhD student, Free University of Brussels, Belgium). It yielded architectural remains belonging to a single level. These remains comprise a monumental building B. 659 and a small house B. 660, surrounded by exterior floors

To the east, the house B. 660 reaches barely 26 m², and comprises 3 rooms. According to Cécile Verdellet, the ceramic material is characteristic of what is expected in a domestic unit, that is to say pottery for preservation, preparation and consumption of food. However, the house in Area E is atypical. Even if its ceramic assemblage does correspond to a house, it is built against a public edifice, not included in a domestic quarter. In addition, it is carefully built despite its small size.

The monumental building B. 659 was identified in 2015 but its exploration only began in 2018. Its eastern façade is at least 20 m long. Its southeast corner has been found but its other limits are uncertain. Three rooms were excavated over their entire surface (Fig. 09). They are small and cover about ten square meters.

²⁶ Lithic artifacts are less numerous, and less diverse than in the other areas (see Marchand in press).

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²⁷ Faivre 1995, p.

To the north, room L. 690 has a layout that is reminiscent of a stairwell, but this hypothesis is still speculative because the excavation area is exiguous,

In the centre, room L. 691 has two entrances, one to the west and the other to the south. The floor was covered with sherds, some of which belonged to atypical forms. Among them were discovered tablets. Only one (M. 632) was in good enough condition for Philippe Clancier to propose a preliminary reading from the photographs taken in the field (Fig. 10). It is an administrative text that mentions large quantities of a product that could be grain. 5 new person names, all incomplete, appear in this text, including an Akkadian name and a Sumerian one. The quantities are recorded in a unit of capacity unknown to date: the GUR of the Subartu. The term Subartu is well documented, it refers to the North in the broad sense, but this is the first time that a GUR of the Subartu has been attested (see Clancier in Tenu (ed.) in preparation). In the same room, there are "clay barrels" that show similarities with discoveries made in Susa for instance. It may be clay prepared to make tablets.²⁷

The third room excavated so far also has two doors. One of them had three steps made of terracotta tiles (Fig. 11). A lion's paw bone was discovered there. Generally speaking, the fauna of Area E also shows the predominance of domestic species (but without dogs or horses). In addition to the lion, Michaël Seigle recognized, among others, wild goat (*Capra aegagrus*), Red deer (*Cervus elaphus*), Roe deer (*Capreolus capreolus*), Fallow deer (*Dama mesopotamica*), crane (*Grus grus*), as well as another type of sea shell from the Persian Gulf.

The walls of Building B. 659 are constructed with a stone footing and a massive earthen superstructure. The latter is often very regular with layers that look like bricks. This impression is misleading because the earth is used in a wet and plastic state.

The three rooms excavated to date certainly form a small part of a much larger building. This may be the polygonal building visible on the magnetic map where it appeared to be later than the major edifice at Area B. So far, the ceramic and lithic material as well as the radiocarbon dates indicate that they are contemporary.

Phase 4

Finally, the oldest phase, Phase 4, is only documented on Area C. In 2016, under the walls of Building B. 519, the top of the stone walls or basements was discovered (Fig. 12). They have the same orientation as the structures of Phase 3, but a gap may have separated the two phases. The date of

²⁷ Faivre 1995, p. 58; Gasche & De Meyer 2006, esp. Figs. 3-4. I thank Xavier Faivre for these references.

Phase 4 is still unknown. Perhaps it dates back to the middle of the 3rd millennium and corresponds to the oldest level reached in Area D₁ in 2013.

CONCLUSIONS

Kunara is a small site, but in the region around Souleymaniyeh, the many settlements are small. Kunara, with its almost 10 ha, is one of the largest. The discoveries we made there were unexpected. First, the architecture is original. It is of very high quality with a limited use of mud brick and the development of elaborate techniques of massive earth. Then the ceramic production is varied with shapes common to Mesopotamian assemblages, but also rarer elements such as globular pots with handles. The lithic industry is composed of flint and obsidian pieces. However, obsidian is an allogenic raw material, which probably comes from Anatolia, either from the north of Lake Van or from South-East Anatolia (Marchand in press). Yet it has been used in Kunara for ordinary artefacts. Interestingly, obsidian comes from far away, but it has not been reserved for luxury productions or specific products. Finally, the fauna shows, in addition to animal husbandry, the geographical horizon of the inhabitants. There are marine species from the Persian Gulf (600 km away as the crow flies), steppe species such as gazelle, other forest species such as deer or mountain animals such as panther and bear. Hunting was not only aimed to increase food resources, as far as prestigious hunting activities such as bear and lion hunting are also documented.

The most recent studies on pottery show that level 2 of Area A would be contemporary with phase 3 of the lower town. At the same time, public buildings stood in both the upper and the lower town. Explaining the presence of so many monumental buildings is difficult. The simplest explanation is that they had different functions. In particular, one may wonder where the residence of the ensi₂ was located in Kunara.

Finally, since 2018, all the areas in the upper town (A) and in the lower town (B, C and E) have shown signs of destruction by fire.²⁸ Until now, we had interpreted the fire at Area C (phase 3) as a likely accidental event, but we are now considering a destruction, that affected the whole site. Information is still lacking, but it is tempting to link this destruction to the major military events that have marked the region, perhaps one of the campaigns of the King of Ur Šulgi.²⁹ This hypothesis is very attractive but, to date, there is nothing in the archaeological data to support it.

²⁸ No data are available for Area D.

²⁹ Frayne 1997 and 2008. For the history of Kurdistan, see also Ahmed 2012 and SALLABERGER, W., SCHRACKAMP, 2015.

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3rd International Scientific Conference Archaeology and Heritage of Kurdistan.....

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Figures :

Fig. 01: Map o
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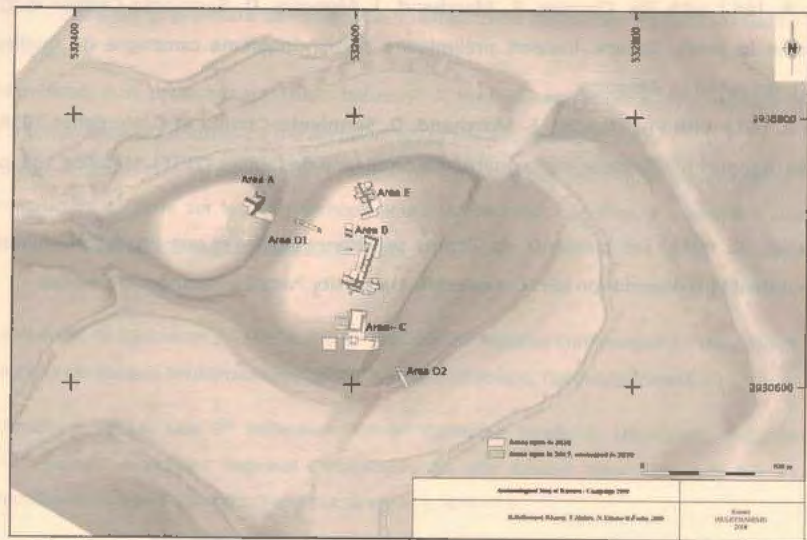
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Figures :



Fig. 01: Map of the area around Kunara (H. David-Cuny, Mission archéologique française du Peramagron)



g. 02: Topographical map of Kunara (Mission archéologique française du Peramagron)



Fig. 03: General of view of Area A looking west in 2013(Aline Tenu, Mission archéologique française du Peramagron)



Fig. 04: Area B, the main building B. 712 and the passageways (Aline Tenu, Mission archéologique française du Peramagron)



Fig. 05: Animal figure M. 163 (Laetitia Munduteguy, Mission archéologique française du Peramagron)



Fig. 06: Earthen superstructure with visible layers in wall 114, Area B, (Aline Tenu, Mission archéologique française du Peramagron)



Fig. 07: Building B. 517, area C (Barbara Chiti, Mission archéologique française du Peramagron)



Fig. 08: Zoomorpi
française du Perar



Fig. 08: Zoomorphic vessel in the shape of stylized fish(Florine Marchand, Mission archéologique française du Peramagron).



Fig. 09: The three rooms of building B. 659 looking west, Area E (Aline Tenu, Mission archéologique française du Peramagron)



Fig. 10: Reverse of Peramagron)



Fig. 10: Reverse of the tablet M. 632, Area E (Aline Tenu, Mission archéologique française du Peramagron)



Fig. 11: Room L. 692 looking south-west (Aline Tenu, Mission archéologique française du Peramagron)



Fig. 12: Stone wall of Room L. 692 (Aline Tenu, Mission archéologique française du Peramagron)



Fig. 12: Stone structures of phase 4, Area C (David Sarmiento Castillo, Mission archéologique française du Peramagron).