THE NEW STRUCTURE OF THE *DAVA* AT POPEȘTI (GIURGIU COUNTY, SOUTHESTERN ROMANIA, 2nd CENTURY BC – ca. AD 6), BASED ON THE 2019–2020 PREVENTIVE EXCAVATIONS. THE FIRST DATA

Nona PALINCAS

Vasile Pârvan Institute of Archaeology, Bucharest; e-mail: palincas@gmail.com

To Cecilia Dumitrache, whose warning about an illegal change to the site ultimately led to these recent discoveries

Keywords: dava, Argedava, decorated hearth, public building, deposition of human bodies, epigraphic stamp, imitative Rhodian amphora, bronze balance scale, Vârteju-Bucuresti –type coin

Abstract: The aim of this preliminary report on the preventive excavations carried out in 2019–2020 in Settlement B of the well-known dava at Popești (Giurgiu County, in southern Romania) – the site identified by Radu Vulpe with Argedava – is to draw attention to the changes that need to be made to our previous image of the structure of the dava as well as to the fact that the area that is the source of this new information – the cemetery of the modern village – is gradually being destroyed by ongoing burials while the resources available for the rescue of the archaeological data are meagre in comparison to the importance of the findings. The pre- and post-dava habitations will not be discussed here. Even those belonging to the dava period are presented selectively, and based mainly on the observations made during the excavations, as so far the vast majority of the artefacts could not be cleaned, let alone interpreted. What emerged from the 2019–2020 excavations in the cemetery area is that Settlement B was not used exclusively for habitation by commoners, as previously believed, as it had specialized neighbourhoods for public rituals (with large buildings and decorated hearths), possibly iron metallurgy, and certainly wine production and trade. Thus, the dava is a much more complex urban settlement than previously envisaged. These data potentially contribute to a better understanding of the economic, social and political processes that led to the extraordinary achievement that was the formation of the first Dacian state. However, unless urgent measures for preservation and/or research are taken, a large part of the still available information will be lost forever.

Cuvinte-cheie: dava, Argedava, vatră decorată, clădire publică, depuneri de corpuri umane, ștampilă epigrafă, imitație de amforă rodiană, balanță de bronz, monedă de tip Vârteju-București

Rezumat: Scopul acestui raport preliminar asupra săpăturilor preventive desfășurate în 2019–2020 în Așezarea B a cunoscutei dave de la Popești (jud. Giurgiu) – situl identificat de Radu Vulpe ca Argedava din izvoarele antice – este acela de a atrage atenția asupra nevoii de a modifica imaginea noastră cu privire la structura davei, precum și asupra faptului că zona din sit care este sursa acestor noi informații – respectiv cimitirul satului actual – este distrusă treptat de înmormântări, în timp ce resursele disponibile pentru salvarea informației arheologice sunt disproporționat de reduse după orice standarde, și cu atât mai mult prin comparație cu importanța descoperirilor in discuție. Locuirile pre- și post-dava nu vor fi tratate aici. Chiar și acelea aparținând davei sunt prezentate selectiv și în principal pe baza observațiilor făcute în timpul săpăturii, deoarece, până acum, cea mai mare parte a artefactelor nu au putut fi curățate și deci cu atât mai puțin interpretate. Ce rezultă din săpăturile din 2019–2020 din aria cimitirului este că Așezarea B nu era o zonă utilizată exclusiv pentru locuire de către populația de rând, așa cum s-a crezut anterior, ci avea cartiere specializate pe ritualuri publice (cu clădiri mari și vetre decorate), probabil metalurgia fierului, sigur producție și comerț cu vin. Astfel, dava în întregul său devine o așezare urbană de complexitate mult sporită față de ce s-a știut anterior. Aceste date contribuie la mai buna înțelegere a proceselor economice, sociale și politice care au făcut posibilă extraordinara realizare care a fost formarea primului stat dac. Totuși, dacă nu se vor lua rapid măsuri pentru conservare sau/și cercetare adecvată, mare parte a acestui potențial de informație va fi pierdut.

INTRODUCTION

The paper presents the key findings of the preventive excavations from 2019–2020 carried out in the *dava* at Popești, identified by Radu Vulpe with Argedava mentioned in the antique written sources (R. Vulpe 1976; A. Vulpe 2004–2005, p. 36; see also Petolescu 2001), to highlight important changes in our knowledge, the ongoing destruction of one of its most significant parts, the disparity between the importance

of this site and the current means of rescuing archaeological data as well as the tasks to be addressed by future archaeological research.

The *dava* at Popești is situated approx. 25 km southwest of Bucharest, on the right bank of the Argeș River, on the roughly triangular, nearly north—south oriented, almost 1 km long and approx. 14 m high promontory that rises from the river's first terrace (Fig. 1 and 2). It was fortified by three ditches: one cut at the very base of the promontory and the other two parallel to it

MATERIALE ȘI CERCETĂRI ARHEOLOGICE (serie nouă), XVII, 2021, p. 49-70

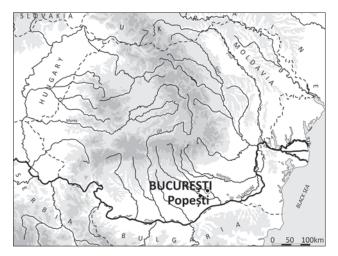


Figure 1. Popești. Location (map: Iuliana Barnea).

northwards (Fig. 2). Each of the ditches delimits a sector of the site, called settlement.

Settlement A is situated at the northern end of the promontory, on a 1.42 ha triangular piece of land called by the locals 'Nucet'. This is the best-known part of the dava due to several years of excavations – albeit with many, often lengthy interruptions - between 1954 and 2001. The local name of this spot was given to the entire site. Thus, Popești - Nucet designates the dava and not just Settlement A. The latter was much better researched than the other two settlements because the land had no owner and was not in use (the partly filled excavation trenches made it unsuitable for agriculture and limit the areas suitable for grazing) and because it yielded impressive habitation remains from various periods: in reverse order, five layers from the Late La Tène period (ca. 150 BC – ca. AD 6), scattered traces of habitation from the Early La Tène period (4th–3rd century BC), one Middle Hallstatt layer (Basarabi Culture, ca. 800-650 BC), two Early Hallstatt layers (Pre-Basarabi, ca. the 10th–9th century BC), several Late Bronze Age layers (of Zimnicea-Plovdiv/ Radovanu type and Fundeni-Govora type, ca. 1350–1200 BC and ca. 1550-1350 cal BC, respectively), and one Early Bronze Age layer (Glina Culture) (Vulpe 2004–2005, p. 22-23). Apart from the Early La Tène and the Glina dwelling remains, the others stand out for their respective epochs as the largest settlements known so far. Of interest here is the dava period - i.e., the most recent five layers, labelled from bottom to top as LT II 1-5 (to distinguish them from the LT I deposit of the 4th (possibly also 5th)-3rd century BC: A. Vulpe 2004–2005, p. 23). Their impressive architecture – the building in the shape of a basilica (R. Vulpe, 1959, p. 308-310) and the large workshops occupying together approx. 1,200 m² (A. Vulpe 2004–2005, p. 24), the dense population indicated by the many regular surface houses with adjacent dugouts used as cellars, the large number of objects - many belonging to the luxury category (mainly various imported Hellenistic wares: e.g., R. Vulpe 1959, p. 316, 319; R. Vulpe 1962, p. 459–460; R. Vulpe 1976, p. 75–77; Popescu 2013, p. 202–204 and *passim*, as well as local imitations of the former: R. Vulpe 1976, p. 75–77; A. Vulpe, Gheorghiţă 1976; Eftimie-Andronescu 1967, Streinu 2016) – made Radu Vulpe define this segment of the *dava* as 'acropolis': the place with the 'palace' – *i.e.*, the residence of the local *basileus* and the public buildings (R. Vulpe 1957, p. 227; R. Vulpe 1959). Later excavations, carried out under the direction of Alexandru Vulpe between 1976 and 1995 (*e.g.*, A. Vulpe, Gheorghiţă 1981; A. Vulpe 1997; A. Vulpe 2004–2005) and Nona Palincaş in 2000–2001 (Palincaş, Lippert 2003) strengthened this view.

South of Settlement A/Acropolis is Settlement B, a trapezoidal area delimited by the first and the second ditch, and presently occupied by agricultural plots (approx. 1.38 ha) and the village cemetery (1.58 ha). Until recently, this yielded in comparison to Settlement A only modest habitation remains and was considered the residential area of a population of lesser social standing, who probably moved here following the overpopulation of the Acropolis (A. Vulpe, Gheorghită 1979, p. 98, 103).

Further south, Settlement C, situated between the second and the third ditch, is presently completely occupied by the houses and gardens of the northern part of the contemporary village. Only discontinuous habitation traces are known from here (R. Vulpe 1955, p. 258; A. Vulpe 2004–2005, p. 19).

In light of the recent preventive excavations carried out in the area of the cemetery, this structure of the *dava* needs to be amended. Also, adequate measures need to be taken to save the *dava* remains in this area from destruction.

HISTORY OF THE RESEARCH IN SETTLEMENT B

The first excavation in Settlement B, of which this author is aware of, was carried out in the 1940s and consisted of a trench dug across the western part of the second defensive ditch to clarify its dating. There is no written record of this first excavation. Its existence was known to A. Vulpe and confirmed by Mircea Petrescu-Dîmboviţa during a visit to the site, in 1991: the latter informed A. Vulpe and Nona Palincaş that he conducted this excavation (seemingly together with Eugen Comṣa) at the request of Ion Nestor, to whom he then handed the documentation and that it could be established that the ditch had been dug in the La Tène period. Nestor never excavated at Popeşti and currently, the only explanation for his involvement remains his friendship with D. V. Rosetti, who excavated in Settlement A during 1932–1947.

In 1954, when Radu Vulpe took over the direction of the excavations at Popești, he tried to obtain some information about the plateau south of Nucet and dug a small trench of $10 \text{ m} \times 2 \text{ m}$, close to the church, perpendicular on the eastern slope, in a place then not disturbed by graves. He found the subsoil at only -0.60 m and concluded that this part of the settlement was inhabited only occasionally, probably in times of danger,

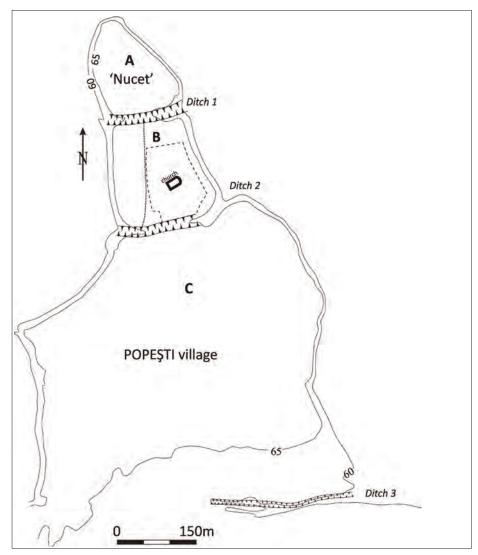


Figure 2. Popeşti. Simplified topographic plan of the dava with its Settlements A, B (with the church) and C and the three ditches (from A. Vulpe 2004–2005, fig. 2, left, to which the road from the village to "Nucet" and the approximate perimeter of the cemetery were added).

by a refuge-seeking population from the surrounding area (R. Vulpe, 1955, p. 258). In 1957, he excavated two parallel, north-south oriented trenches of 10 m × 1 m and 5 m \times 1 m, in front of the church, parallel to the road. Here he found a Late Iron Age deposit that ended at -0.90 m, at the subsoil , quite as in a grave pit 30 m further north-east that he was able to observe while it was dug (R. Vulpe 1959, p. 321). In 1958, he excavated a trench in the southwestern part of the 'Old cemetery', oriented north-south, parallel to the road connecting the village to the church, to investigate the northern slope of the ditch. The trench (only ca. 14 m \times 1 m and -1.70 m deep) yielded traces of construction activity from the 17th-18th centuries as well as, between -0.40 and -1.40 m, remains of the Late Iron Age deposit that became thinner from north to south and overlapped a thick layer of clay stemming from the construction of the second ditch (R. Vulpe 1961, p. 335, fig. 1).

Systematic and partly published excavations took place in 1976 and 1977, by Alexandru Vulpe and Marieta Gheorghiță. The 60 × 2 m trench from the first campaign, situated along the road connecting the village church with Nucet, which uncovered an archaeological deposit that reached up to -2.00 m in its northern part, had one to three living floors: one dugout was superimposed by a hearth and two levelling layers; five pits – belonging with certainty to the middle and the most recent layer, but possibly also to the earliest one - contained seven human skeletons or parts thereof (A. Vulpe, Gheorghiță 1979, p. 96, where they are referred to as graves; Fig. 3). In the northern part of the excavated area, there was a layer dated to the 4th (possibly also 5th)-3rd centuries BC, superimposed by a layer resulting from the restoration of the first ditch of the dava (i.e., the first ditch was built in the Late Bronze Age [Palincaş 1996; 2000; Fischer 1996; 2000] and was restored when the dava was organized). The trench from 1977, measuring 42.5 × 2 m, was situated in the northern

part of the cemetery, oriented east-west, perpendicular to the former, and yielded a deposit extending down to ca -0.80-0.85 m, with two identifiable living floors from the classical La Tène period as well as a possible third one on top – corresponding broadly to the stratigraphy of the 1976 trench, but at shallower depth owing to modern works in the area; underneath, there was also a discontinuous layer from the Early Hallstatt period. To the La Tène habitation belong two dugouts and eleven pits, one of which also contained a crouched human skeleton with detached skull. Fragments of roofing tiles suggested that buildings with tile roofs existed here also. Nevertheless, compared to Settlement A, Settlement B gave a general impression of shorter duration, simpler architectonic remains and rarity of valuable items – despite the large number of artefacts of everyday use guite like those from Settlement A. This is why the excavators argued that Settlement B was inhabited by people of lesser social standing than those in Settlement A, who moved here gradually due to overpopulation of the latter (A. Vulpe, Gheorghiță 1979).

Further systematic excavations were carried out in 1991 by Vlad V. Zirra: the 57×1.50 m trench situated on the agricultural plot of a local, roughly opposite the main cemetery gate and slightly toward Settlement A, oriented perpendicular to the cemetery fence yielded a 1-1.20 m thick deposit, with two layers containing abundant archaeological material typical of the dava period, but with no architectonic remains other than an oven at the eastern end of the excavated area (unpublished; Excavation diary of 1976, 1977 and 1979, p. 29–30, annotated in 1991 by A. Vulpe; V. V. Zirra – personal communication February 2021).

In 2001, during the digging of a grave-pit at the then northwestern limit of the cemetery, the villagers reported finding several large sherds. On checking this location, the present author recovered more pottery fragments and established that between approx. -1.60–1.80 m there was a layer from the Pre-Basarabi period. On top of that layer, there was nothing to indicate any habitation traces. Following this finding, the local priest was asked to notify any digging of new graves in the cemetery, to secure archaeological assistance and prevent the destruction of archaeological remains.

Otherwise, at the end of 2001, the decision was taken to cease systematic research on the site and to focus on the site monograph. No field research took place in the years following since the local priest never reported the excavation of any new grave-pits and, when asked, maintained that there were no more free spaces in the cemetery and that new graves were dug in place of the older ones – a plausible argument for such an old cemetery (the beginning of which was then believed to be contemporaneous with the church – *i.e.*, 1689 –, but later turned out to have been even earlier: Palincaş *et alii* 2010).

New excavations at the site became necessary in 2009 (May, July–September and November) owing to the restoration (strengthening against earthquakes) of







Figure 3. Popeşti. Settlement B: human skeletons from the 1976 campaign. a-b) the superimposed skeletons labelled as Graves 3 and 4 and human skull labelled as Grave 5; c) detail of the skeleton labelled as Grave 4, laid underneath the skeleton labelled as Grave 3 (see Vulpe, Gheorghiţă 1976, pl. I). Note that the bodies must have been fitted into a container as the bones that preserved some anatomical connections are collapsed to the same level (photo: Alexandru Vulpe).

the church. These were limited to six squares adjacent to the outer part of the church walls, two squares inside the church adjacent to the southern wall of the nave, one transverse trench through the sanctuary and one trench surrounding the outer walls of the narthex and the nave,

totalling 72.34 m² and extending down to between -0.77 and -2.70 m depth, depending on the hardness of the surrounding deposit. The habitation traces datable to the Late La Tène period consisted in only four pits and two dugouts, cutting through the Basarabi and Pre-Basarabi layers into the subsoil and being heavily destroyed by Late Mediaeval—early Modern graves as well as by the construction of the church itself (Palincaş *et alii* 2010).

After 2009 fieldwork was halted once more and the excavation staff returned to working on the site monograph, convinced that the site would remain unchanged. However, in March 2019 Cecilia Dumitrache, owner of a house in Popești, reported the illegal filling of a part of the second ditch. The site visit that followed not only confirmed this illegal modification but identified other irregularities, among which was the digging of a vault pit (west of the Mierlaru grave) in a still *in situ* area in the central part of the cemetery. Legal action was taken, but the only progress so far is that since April 1, 2019, before every new grave and vault pit, preventive excavations are carried out. Although this solution is far from ideal (see below), it nevertheless led – as already mentioned – to important changes in our knowledge about the structure of the *dava*.

A SUMMARY OF THE EXCAVATIONS FROM 2019–2020

Method

Ideally, the cemetery should have been closed and a new burial ground provided for the village, but the parish does not have the money to buy one and the town hall does not have such a plot. The second-best solution would be the excavation of the still undisturbed areas in the cemetery. This solution, unfortunately, is not applicable because of lack of funding: the parish does not have the money for preventive excavations either (the village is small – of the 1,191 villagers recorded in the population census from 2011 [see Popești-Mihăilești in http://www. recensamantromania.ro/rezultate-2/] there are now probably only about 800 and a large proportion of them are elderly people with low incomes) and none of the institutions to which this author applied for funding of systematic excavations (Romanian Academy, the Ministry of Culture, the town hall of Mihăilești and the Giurgiu County Council) has so far granted any money. As burials requiring the digging of a new grave (about 15–20/year) and constructions of new vaults (3-4/year) cannot be put on hold until the problem of preventive archaeological research is solved according to the law, the only solution found so far has been to excavate pit by pit in the areas known as undisturbed and to provide archaeological supervision in case of the digging of new grave-pits in the areas with existing graves, to recover artefacts and document profiles through the site in those places where the new and old graves do not coincide exactly and the ancient deposit is still visible on the sides of the new graves.

This provisional solution has important disadvantages. One is the very short duration of the archaeological research: there is usually only one workday for a standard grave-pit, while in the case of vault-pits, the pressure to lower costs forces the excavators to work at a pace that does not allow observations commensurate with the importance of this site. Additional problems occur in the digging of vault pits due to the lack of a labour force: work is sometimes interrupted for many days in a row and/or postponed into the rainy season, which in turn damages the excavated surfaces and inevitably leads to loss of data (Fig. 4). Another disadvantage is the stress on the archaeologists' schedule as they have to carry out the preventive excavations for a pit grave at short notice, from one day (sometimes evening) to the next, at random dates, depending on when somebody dies (by tradition as well as because the village does not have a chapel to house the bodies of the deceased, the local expectation is to bury the deceased on the day following the death or, at most, two days later). To this are often added the discomfort of having to deal with the locals' protests against the increased costs of an unqualified labour force and longer digging time caused by the archaeological work. A further disadvantage is that, under the circumstances, most of the costs other than that of the unqualified labour force (the



Figure 4. Popești. Vault-pit of the Gheorghe family: image of the excavated area at the level of the third living floor, after ten days of interruption caused by lack of labour force and a few October rainy days. Marked spot: approx. 20–30 cm on top of the findspot of the brooch in Fig. 7 (photo: Marian Giurea).

costs of the qualified work, equipment and materials for field documentation, cleaning and primary documentation of artefacts, writing of various reports, often transportation to the site as well, etc.) fall on the project director and the Vasile Pârvan Institute of Archaeology, although legally they should be covered by the landowner. Consequently, it is difficult to find archaeologists willing to put up with these working conditions, especially as there is a general shortage of archaeologists and other preventive excavations offer better work conditions. Furthermore, the excavation has to be limited strictly to the space occupied by the graves and the vaults and cannot be extended to the sometimes exciting undisturbed areas around them, not even if the latter are small – sometimes only between 0.50 and 1 m wide. Thus, on the one hand, the information recovered is highly fragmented and, on the other, the small in situ areas between graves remain unsearched, most probably forever, as they become too small to be worth excavating in their own right. Moreover, as the stratigraphy of the La Tène habitation proved to be highly variable from place to place – ranging between two to seven living floors in various parts of the site in unpredictable order –, the observations made during the digging of grave- and vault pits cannot be linked to one another and, consequently, the evolution of the dwelling on the site cannot be reconstructed beyond the general attribution to the dava period, as indicated by artefacts. These disadvantages and difficulties notwithstanding, this approach to the problem of the cemetery area is the only solution found so far to avoid further loss of whatever archaeological information has not already been destroyed by the burials and this led to important changes in our view of the structure of the dava.

In presenting the excavation results, because the cemetery was never properly parcelled and so far we have not managed to complete a plan of the cemetery, for reporting the location of the excavated areas the name of the deceased will be used in the case of grave pits and of the family in the case of vaults.

Results

The following data are the most representative for Settlement B of the *dava* in the cemetery area.

Architecture

The most surprising discovery was made in the northwestern part of the cemetery, during the digging of a vault pit for the Gheorghe family in 2020 and consisted of remains on five successive living floors, four of which had building remains, including a large decorated hearth (Fig. 5–6 and 10–11).

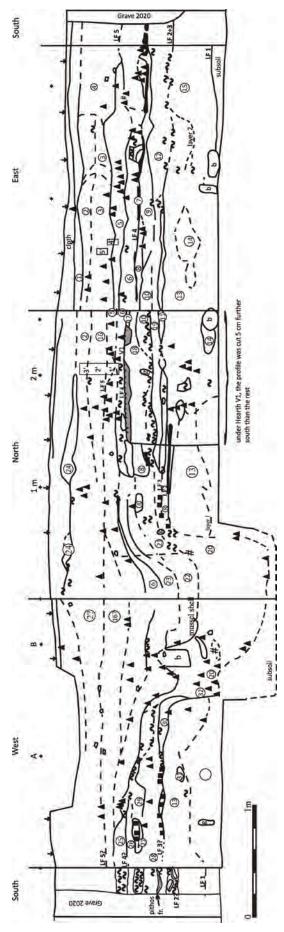
The excavated area of the vault-pit is a roughly east—west oriented rectangle that measured 2.50×2.30 m. Its southern half was nearly completely occupied by a burial from 2010, which left *in situ* only two small, approx. 20 cm wide strips along the western and eastern sides of the

grave-pit. Thus, apart from these two strips, the *in situ* preserved settlement area was limited to the northern half of the vault pit, and measured 2.50×1.10 m (widened by approx. 3–5 cm after rain that damaged the exposed excavation area: Fig. 4). The data recovered are presented here from bottom to top, in keeping with the site formation process and with the order used for this site in previous publications (*e.g.*, A. Vulpe 2004–2005, p. 23–24; A. Vulpe, Gheorghită 1979).

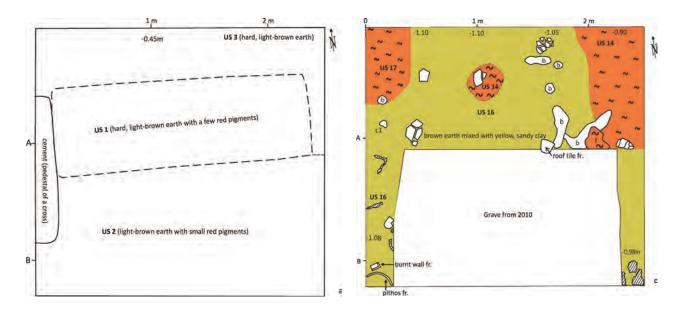
From the first living floor, immediately above the subsoil was a 15-40 cm thick layer of blackish-brown earth with very small, rare red pigments stemming from small pieces of burnt daub (Fig. 5: LF 1 and Fig. 6/e). This layer contained few artefacts, primarily Late La Tène sherds, very few tiny sherds that could be prehistoric and possibly an iron brooch (Fig. 7, but see discussion below). There are no building remains from this living floor, the only structures that could be seen being pits: one, dug from the following living floor, occupied most of the area and another three, in the northwestern corner, dug from the several overlying living floors so that each new pit contour was smaller than the previous one. The characteristics of this layer – the rare, small pieces of pottery and burnt daub mixed in a thick layer of earth – suggest that there was an interruption in the habitation between the first and the second living floor when the remains of the first living floor were exposed to weathering, or that this was a peripheral dwelling area at this first chronological level.

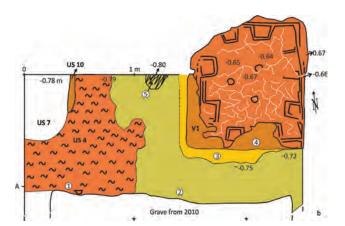
The second living floor is visible in the northern profile (Fig. 5: LF 2), at about -1.07 m depth, at the boundary between squares 1 and 2, due to a strip of dark earth (most probably resulting from the burning of wood), as well as to the slight thermal print underneath it. It was not seen in surface view because the excavation area was damaged by rain during the ten days of interruption of the work (Fig. 4). In the southern profile, continuing into the unexcavated area, there were building remains that could belong to this living floor: two large pieces of a burnt daub screen or fence, one with a concave, discoid protrusion (Fig. 8). Next to them, was a well-preserved little jar, typical of the La Tène pottery in the dava (Fig. 9). Nevertheless, because the traces of the second living floor visible in the northern profile are thin and the pits in the north-western corner of the excavated area make it difficult to follow the living floors along the trench profiles, it cannot be excluded that this assemblage belongs to the third living floor.

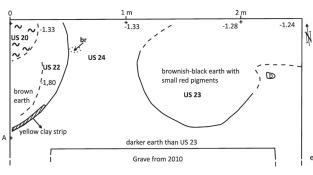
The third living floor, found a few centimetres above the previous one, covering the northern half of the vault pit as well as the eastern and western in situ preserved strips, consisted of a hard surface of light-brown earth mixed with yellow clay with a sandy texture (Fig. 5: LF 3 and Fig. 6/d). On different parts of this surface there were pieces of clay vessels — originating from handmade jars, so-called 'fruit bowls' (in Romanian ,fructiere'), etc. — broken on the spot as well as a piece of a large, curved roofing tile. In the northwestern corner of the excavated area, there is



blackish; 20. Grey earth with coarse, loose texture; 21. Similar to no. 20, but slightly more yellowish and with very small burnt daub fragments; 22. Reddish-brown earth with loose texture; 23. Yellowish-brown earth with reddish-brown shade; 24. Light reddish-brown earth with yellowish shade; 25. Small, red burnt daub fragment, close to each other, in a medium brown earth; 26. Medium brown earth; 27. Burnt layer with predominant black earth and with burnt daub fragments; 28. Medium brown earth with very small, but relatively dense red pigments; 29. Medium brown earth with coarse texture and very rare and small red Figure 5. Popesti. Vault of the Gheorghe family: profiles (LF—living floor; V1— Hearth V 1). 1. Topsoil (greyish light-brown clay); 2. Earth similar in colour to no. 1, but with a darker grey shade and coarse texture; 3. Light brown-yellowish, very hard clay, probably from unburned daub wall(s); 4. Blackish light-brown earth; 5. Light-brown earth with greyish-yellowish shade; 6. Layer of small fragments of burnt daub; 7. Layer of black; burnt clay containing a black powder resulted from burnt wood; 8. Brown earth with strips of yellow clay; 9. Like no. 8, but with less yellow clay; 10. Blackish dark-brown earth with clear traces of burning; 11. Layer of numerous small burnt daub fragments; 12. Brown earth with very small red (burnt daub) and rarer yellow (clay) pigments; 13. Blackish brown earth with very rare burnt daub fragments; 14. Yellowish-brown earth; 15. Like no. 12, but with less pigment; 16. Greyish light-brown earth with very rare red pigments; 17. Hearth surface (V1); 18. Clay from the structure of V1 with thermal imprint; 19. Like no. 10, but more pigments; 30. Medium brown and reddish-brown earth with very numerous red and sometimes also black burnt daub fragments; 31. Burrow? (brown earth with very small burnt daub fragments); 32. Yellow clay Nos 1'–5' – locations of the pedological samples.







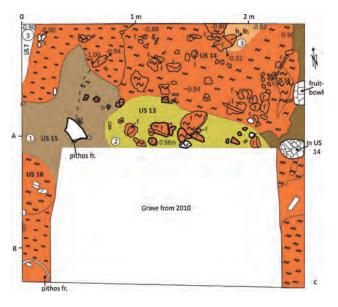


Figure 6. Popești. Vault of the Gheorghe family. Figure 6a. The fifth living floor: layer of hard, brown-yellowish earth, probably the unburned remains of a daub house (US – stratigraphic unit); Figure 6b. The fourth living floor with Hearth V1 (decorated). 1. Small burnt daub fragments in brown earth; **2-3.** Thermal imprint of Hearth V1; **4.** Surface of Hearth V1; **5.** Burnt earth with pieces of burnt wood (US – stratigraphic unit); Figure 6c. The debris on the third living floor. **1.** Light brown, unburned earth pigmented with yellow clay; 2. Very hard, yellowish-brown clay; 3. Thermal print from Hearth V1 (above); US 14 - layer of red burnt daub; burnt daub pieces with a thicker outline – underneath US 13 (no. 2); \emph{f} – smoothed wall surface; $\emph{h. fr.}$ – fragment of hearth surface; Figure 6d. The third living floor: US 14 and **US 17** – layer of burnt daub fragments; **US 16** – very hard, light-brown earth mixed with yellow clay; contours with white filling – sherds; dashed strips – strips of yellow clay; **f** – smoothed side of burnt daub wall fragments; **b** – burrow; **Figure 6e.** Plan of the first layer at 2–10 cm above the first living floor; br – area where the La Tène brooch was found; b – burrow; **fr.** – fragment.

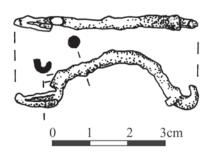


Figure 7. Popeşti. Vault of the Gheorghe family: iron brooch with frame-catch plate (drawing: Iuliana Barnea).



Figure 8. Popești. Vault of the Gheorghe family: part of a burnt daub fence/screen, in the southern profile (i.e., outside the excavated area), most probably belonging to the second living floor; the dotted line stands for the approximate contour of the broken decorative protrusion.

a pit dug from this living floor, more clearly visible in the northern profile than on the excavation surface (Fig. 5). It contained mainly sherds and fragments of animal bones. Covering this living floor there was a 20–25 cm thick layer of debris consisting of three strata: the lowest, immediately on the living floor, was an approx. 5 cm thick layer of earth mixed with numerous small pieces of burnt daub (Fig. 5: no. 11); its southern part was covered by a hard layer of yellowish-brown clay (Fig. 6/c: US 13), overlain by an approx. 10 cm thick levelling layer of blackish-brown earth with clear traces of burning (Fig. 5: no. 19); the third levelling stratum was a 5–15 cm thick layer of earth similar to the preceding blackish-brown one, but somewhat darker

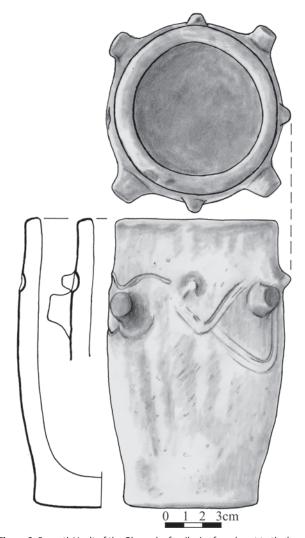


Figure 9. Popeşti. Vault of the Gheorghe family: jar found next to the burnt daub fence/screen remains (drawing: Iuliana Barnea).

and containing in addition many heavily burnt daub pieces, obviously originating from a large building destroyed by fire (Fig. 5: no. 10; Fig. 6/c and Fig. 10). Most of the larger burnt daub pieces were lying with the smoothed side upwards. Not all of them have been examined so far, but the larger ones certainly bear on the inner side the imprint of approx. 2-2.5 cm thick rods and sometimes also of wooden planks that must have measured at least 10 cm \times 2.5–3 cm in cross-section. Some of the pieces had two layers of whitewash, a trait not reported for the basilicas in the Acropolis, but known from some of the ordinary surface houses in Settlement A. This structure was also noticed on the two in situ side strips, the only difference being that there the layer of debris consisted of smaller burnt daub pieces (Fig. 6/c). Close to the northern profile, among the debris, there was also one dislocated piece of hearth-surface decorated with a groove, but since no corresponding thermic print could be identified (that visible in Fig. 6/c clearly stems from above and cannot belong to the hearth-surface fragment in question), this hearth-surface fragment could either originate from a



Figure 10. Popeşti. Vault of the Gheorghe family: the debris on the third living floor. Note that the northern profile visible in this photo is slightly different from that in Fig. 5, as this photo was taken before the profile was destroyed by the rain and had to be cut anew (photo: Cătălin Voivozeanu).

hearth in this layer that was somewhere close by but not in the excavated area, or from a hearth dislocated from a previous layer.

This debris layer with large pieces of wall was covered with a 10–15 cm thick layer of brown earth with a high content of yellow clay, the upper part of which formed a hard surface that is the following – *i.e.*, the *fourth* – living floor (Fig. 6/b). In the northeastern corner of the excavated surface, there was a decorated hearth, approx. 1 sq. m of which was in the excavated area; the rest, amounting to approx. 1/3 of its surface, was extracted by digging a hole in the north profile at the end of the excavation campaign (Fig. 5: V1; Fig. 6/b and 11).

The hearth had the shape of a roughly regular, rectangular truncated pyramid measuring 1.32×1.16 m at its base (measured at the outermost traces of its burnt remains); the top was raised by approx. 10 cm and measured approx. 1.20×1 m (because of the unequal burning of the sides, a certain degree of approximation of the dimensions is inevitable). The upper surface of the hearth was decorated along its edges with two lines forming approximately concentric rectangles on the inner side of which were a total of eight squares — two on each side of the hearth —, with a double contour of







Figure 11. Popești. Vault of the Gheorghe family: a) hearth V1; b-c) details of decoration technique (photo: Cătălin I. Nicolae).

which at least one line was linking each square to the preceding and succeeding ones; in the central area, there were three circles, one of which is, in fact, a large circle sector as it has a partly flattened contour. The circular motifs were obtained by pressing into the wet clay an object with a circular outline which left a 4 mm wide groove. The linear motifs bear, in several places, traces in the shape of a section through a cone indicating that the head of a nail-like utensil was used to obtain the straight lines; the latter are 8–10 mm wide, depending on how much pressure was applied to the nail during decoration (Fig. 11/b-c). Taken as a whole, the pattern is so far unique among the decorated hearths known from Dacia (see, e.g., R. Vulpe 1952, p. 194, fig. 3; R. Vulpe 1955, p. 245; R. Vulpe 1959, p. 308-309, fig. 7; S. Morintz, Rosetti 1959, p. 29, fig. 10; Makiewicz 1976; Trohani 1975, p. 158, fig. 2; Trohani 1986; Turcu 1979, p. 85, fig. 11; Trohani 2005, p. 17, fig. 23; Alexandrescu 1980, fig. 58/2-3; Şerbănescu et alii 2009; A. Morintz 2013; Matei, Măgureanu 2014, p. 222, fig. 5/1; Buzoianu, Bărbulescu 2008, p. 64; Sîrbu et alii 2020, p. 182; fig. 4; Şerbănescu, Schuster 2020); nevertheless, it bears a certain similarity both in terms of motifs (circle and lines that could stem from a rectangle) and the relative dimensions of the grooves with a piece of hearth-surface found dislocated in Settlement A, with the difference that the latter has the two motifs positioned very close to each other (R. Vulpe 1957, fig. 18/2). Unlike the other decorated hearths found in Settlement A/Acropolis, where the motifs, whether more or less complex, are symmetrical and the stages of the manufacturing process were not visible (or at least not recorded as such), the decoration of Hearth V1 is irregular in terms of the contours of the motifs, and the places where the utensil was pressed into the wet clay to draw the lines are easy to see (Fig. 11/b-c). Thus, the general image conveyed by Hearth V1 is that it was decorated by an inexperienced person. Interestingly, the orientation of Hearth V1 seems very similar to that of the hearths in Settlement A -i.e., roughly N-S (more precisely, measured was the eastern section of the vault-pit as this seemed parallel to the southern half of the eastern margin of V1; its orientation was NNW 6275 ‰ - SSE 3075 ‰ on a compass with 6400 ‰, corresponding to NNW 353° - SSE 173°, without including the local magnetic declination, which at the period was positive and of 5°57': https://www.magnetic-declination.com/ locations.php?cc=RO&alpha=p&p=21).

At 0.90 m west of Hearth V1, adjacent to the northern profile, a 5–8 cm wide and 35 cm long, *in situ* burnt clay strip was found (Fig. 6/b: US 10). At first, it was believed to be the remains of a thin, inner daub wall that burned together with the rest of the building and the excavator tried to find its intact base – *i.e.*, the wall with its smoothed faces. The strip came off in small pieces and unfortunately, the decision to observe whether the faces of the daub pieces were orientated in a way consistent with an *in situ*

wall was not taken at the time, so we do not have this kind of observation. In any case, the distribution of the colours in the section through the strip indicates that its upper and western sides were exposed to air during burning, while the core and the other sides were not. As it is too small both in depth (ca 6 cm) and length (c. 35 cm, ending immediately before the new northern profile: Fig. 5) and was situated at the very limit of the pit at the northwestern corner of the excavated surface, it may have been a strip of clay that reinforced the inner side of that pit (similar to the clay strip in Fig. 6e).

The end of the dwelling corresponding to this living floor came about through fire. The burnt daub pieces covering it were considerably smaller than those of the previous phase. On top of Hearth V1 in the area beyond the northern profile, this debris layer contained, among others, a nearly entirely preserved wheel-made strainer (Fig. 12) and a large part of another small, also wheel-thrown vessel.

The next – fifth – living floor is less visible. Because of time pressure, the layer that presented itself as relatively hard earth with no identifiable structure had to be dug by spade. After scraping, no more than a slight colour difference was noticed on the ground, but there was no time to sprinkle water on it in the hope of identifying a clearer structure (e.g., Roskams 2001, p. 111). During the restoration of the excavated profiles following destruction by rain, an approx. 25 cm thick layer of compact, hard clay became visible in the eastern half of the northern profile continuing for approx. 1.20 m in the eastern profile (Fig. 5: nos. 2-3, 16). This layer is consistent with the contour seen on the plan in Fig. 6/a and it most probably represents the unburned remains of daub walls. It does not have the yellow-greenish coloration typical of unburned daub walls, resulting



Figure 12. Popeşti. Vault of the Gheorghe family: wheel-made strainer from the debris level covering Hearth V1 (drawing: Iuliana Barnea).

from the decay of chaff (Haită 2003, p. 30), but it comes close to it and in addition, it also has a shade of brown, which could indicate a high content of organic material (Haită 2003, p. 29). This colour is most probably due to the shallow depth -i.e., the stronger impact of recent vegetation and various activities (including the use of strong herbicides) carried out over the years in the area. Pedological analysis (Fig. 5: nos. 1'–5') may show whether this layer resulted from an unburned daub wall, but it is certainly the result of an architectural feature of some type, the shape of which cannot be determined as it exceeded the excavated area and was largely destroyed by the surrounding vaults.

This latter, hard clay layer was superimposed by two other layers, representing most probably an earlier and a more recent layer of topsoil, totalling approx. 20 cm in thickness.

Summing up, what is certain so far is that the debris found in this area must stem from at least one large building, if not from several, rebuilt four times on approximately the same spot. This can be deduced from: the spatial distribution of the debris, visible in all four excavated profiles at the level of each living floor; the large pieces of burnt daub of the third phase indicating a minimum width of the walls of 15 cm; the large hearth that required a certain distance to the closest walls so that they would not catch fire while the hearth was in use. What is not certain is whether Hearth V1 was internal or situated outside, in an open court of a large building or between buildings. The presence of the hardened floor of yellow clay around V1 might indicate an indoor location, though not certainly. The characteristics of the debris and the presence of a large decorated hearth suggest a building or buildings with public functions rather than mere dwellings.

Little is still *in situ* around the excavated area: in particular, towards the south, there is an approx. 1 m wide strip of land that is still undisturbed, but, whether future excavation will locate at least one wall that would help us reconstruct at least one side of this building and help establish the position of Hearth V1, is unpredictable. Nevertheless, the excavation of this area is notable for the recovery of the large pieces of daub screen or fence with the protruding conic decoration (Fig. 8) – an architectonic element unknown so far from Getic buildings.

The dugout is another architectural feature found in Settlement B, mostly in earlier excavations. They exist in most areas of Settlement A, except for the 'palace' area – i.e. the south-eastern corner, where the basilica and the large workshops are situated. While in Settlement A it could be shown that they were adjacent to surface houses and were used as cellars, in Settlement B their function (dwelling or cellar) was not determined so far. In the recent campaigns, the only dugout that could be identified with certainty was found in the northwestern part of the cemetery (in the area of the Vault of Dumitru Cristea, in 2019). It was situated in the

northwestern corner of the vault pit, only partially within the excavated area, occupying approx. $1.90 \times 0.75 \, \mathrm{m}$ of the latter and had an approximately rectangular shape, with a 22 cm wide posthole in its northeastern corner. Despite the rather large quantity of artefacts present in its several layers of filling, in the absence of their full analysis, it cannot be said whether it belonged to the *dava* period or the Late Mediaeval habitation also present in the area and which destroyed much of the pre-existing deposit. Whether the very deep deposit found in the area of the Popa and Vasile Vault is part of a dugout or derives from surface living floors cannot be established with certainty owing to the small dimensions of the excavated area (Fig. 13).

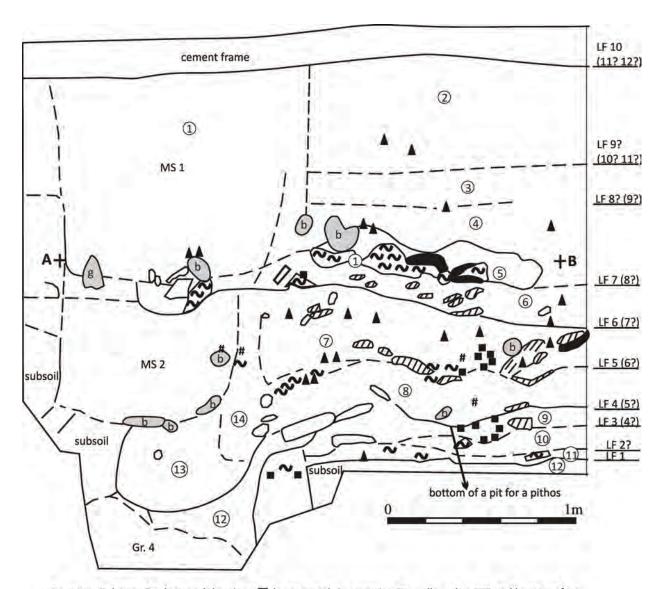
Pits were also found in various places, some of them so deep that they could not be fully excavated for safety reasons (Fig. 13: Gr. 4 and Fig. 14). Most of them contained large quantities of sherds and animal bone fragments and their function remains to be established.

Economy: crafts, maintenance activities and trade

Approx. 10 m east of the vault of the Gheorghe family, in the area of 2.30×1.30 m occupied by the grave of Ion Matei (labelled during excavation as Dumitru Matei), the archaeological deposit amounted to a total thickness of 1.50 m and consisted of four layers to which belonged four pits. No traces from other periods were present. Important here is that, apart from potsherds, the pits also contained pieces of iron slag, indicating that this area could have been close to that where iron implements were produced. Iron slags are not known from Settlement A.

A very well-represented artefact category is pottery, used in maintenance activities, crafts and trade, but also in politics (see wine production and consumption below). Remarkably frequent are sherds of large, red pithoi, found in virtually all the excavated places in the cemetery: sometimes the base sherds were still *in situ* in a specially made, characteristic pit (Fig. 13 and 15; Palincaş *et alii* 2020, fig. 3), often rearranged several times in a row on the same spot (Fig. 13); in most cases, the sherds are scattered among other artefacts in the layers (Fig. 5: LF 3 and Fig. 6/c–d). Exceptionally, one layer contained fragments that would most probably amount to an entire pithos (in the Vault for the Popa and Vasile families).

Well represented in the sherd assemblage are fragments of both imported amphorae as well as their locally produced imitations. One imported amphora was preserved entirely in a pit, in an upright position (in the Vault West of Mierlaru). Nevertheless, the vast majority are highly fragmented and mixed with sherds from other vessel types. Among the imported ceramics there is also a fragment of a *skyphos*, a variant of a Pergamon *skyphos* produced in the West Pontic Greek city-states (Fig. 16; determined by Mariana Cristina Popescu). It was found dislocated in the filling of the grave that preceded that of Gheorghe Macovei from 2020.



> stone; #- bone; →- burnt adobe piece; burnt wood; →- ceramics; →- yellow clay; ∞- red burnt surface.

Figure 13. Popeşti. Vault of the Popa and Vasile families: profile with pithos pits repaired at least four times. 1. Yellowish light-brown earth (filling of Grave MS 1); 2. Light-grey earth with very rare and small red pigments; 3. Brown earth with very small red and buff pigments (small clay inclusions); 4. Like no. 3, but with somewhat larger pigments; 5. Slightly reddish-brown earth with red and black (burnt wood) pigments; 6. Brownish-yellow earth with numerous inclusions of slightly burnt (orange) and unburned (yellow) earth; 7. Slightly reddish-brown earth with black (burnt wood) and red pigments; 8. Brownish-yellow earth with numerous inclusions of yellow earth; 9. Brown earth with fragments of burnt wood; 10. Brown earth with hardly any pigments; 11. Brown earth; 12. Subsoil; 13. Dark brown earth with rare red pigments; 14. Buff earth. Red pigments are small pieces of burnt daub and ceramics. LF – living floor; fr. – fragment.

Among the usual utensils related to maintenance activities, the most remarkable are the grindstones, found in large pieces in the eastern, central and southern parts of the cemetery area (the Grave of Constantin Niţu, the Vault West of Mierlaru, the Cornea Vault), at least one of which is made of a pink, poorly sorted, micro-conglomerate, cochiliferous, with quartz granules and ferruginous or carbonate cement (in the Cornea Vault; identification of rock by Constantin Haitǎ). None of the fragments found so far belong to the Greek type of grindstone (as in R. Vulpe 1959, fig. 8), all being of the rather traditional, simple shape.

While digging the grave of Elena Gheorghe, roughly in the centre of the area between the church and the northern limit of the cemetery, a thin, bronze balance scale bar with one suspension ring at each end was found (Fig. 17). It is thin and light (length = 18.8 cm; maximum diameter = 0.4 cm; weight = 9.6 g), longer and typologically different from the other balance scale bars known so far – see Cățelu Nou (Leahu 1965, p. 61, fig. 37/8) and Poiana (Rustoiu 1996, p. 67, fig. 13/6). It could have been used either for the manufacturing of small metal objects, as suggested by Rustoiu for the other pieces (1996, p. 67), or pharmaceutical measurements.



Figure 14. Popești. Grave of Maria Necula: on the limit of the excavation, two pits can be seen continuing further down; they remained unexcavated for safety reasons (the ladder is 3 m high).

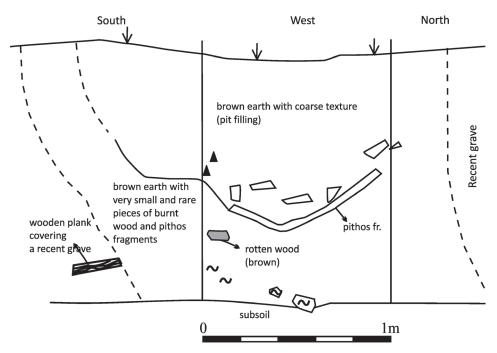


Figure 15. Popeşti. Grave of Mariana Sandu: in situ bottom of a pithos. Wavy line – burnt daub fragment; angular signs – larger potsherds; black triangle – small potsherd; **fr.** – fragment.

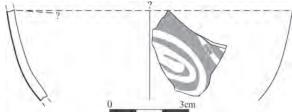








Figure 18. Popești. Grave of Constantin Nițu: a) obverse and b) reverse of the Vârteju-București type coin found in Pit 1.



Figure 16. Popești. Grave of Gheorghe Macovei: skyphos fragment: a) drawing (by Iuliana Barnea) and b) photograph.

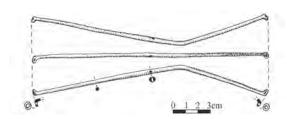


Figure 17. Popești. Grave of Elena Gheorghe: bronze balance scales (drawing: Iuliana Barnea).

Clues for dating

As already mentioned, the artefacts recovered are still far from being analysed, but those that were noticed during excavation as relevant for dating are singled out here: a Vârteju-București coin, a locally produced amphora handle with an epigraphic stamp, a few clay vessels and an iron brooch.

At the easternmost limit of the cemetery (the grave of Constantin Niţu), in a formerly in situ area, in a La Tène pit (labelled as Gr. 1) containing La Tène sherds and fragments of animal bones, there was also a coin of Vârteju-București type $(2.19 \times 2.06 \text{ mm}; 5.9 \text{ g}; \text{ Fig. 18})$. No archaeometric analyses were carried out so far, but the presence of a thick layer of green oxide on its surface suggests that, quite like the other pieces of the type, this also has a small silver title. Generally, these coins are dated to approx. 130–80/70 BC (Preda 1973, p. 238, 245), but whether this particular coin got into the pit during the period it was in general use – and thus the pit from the Niţu grave was contemporaneous with layers LT II 1–3 from Settlement A (Preda, Palincas 2004–2005, p. 78, 81) – or later, cannot be established with certainty.

The handle of a locally imitated Rhodian amphora with an epigraphic stamp with Greek writing that reads Δ ί<ο>ννος on the first line and Πυθο<δ>ώρου on the second was found in an in situ area excavated for the Vault of George Cornea, on the second Late La Tène living floor from the bottom upwards. The stamp dates to the late 3rd century BC, more precisely 220-206 BC, and its dating is compatible with that of the handle according to the typology of the genuine Rhodian amphorae (dated by Alexandru Avram; see Palincaș, Avram, forthcoming). Amphorae were often reused (see, e.g., Panagou 2016, p. 313, and cited literature; for an example from Popești: R. Vulpe, 1957, fig. 13/4) so that it cannot be specified how much time elapsed since this one was produced until it got into the debris of the layer where it was found. Also, it cannot be established whether the preceding layer is the earliest of the dava in Settlement B. Nevertheless, the dating of this stamped amphora handle could suggest that the dava in Settlement B was founded already at the very beginning of the 2nd century BC, as the pottery does not allow an earlier dating. This raises the question of whether the beginning of Settlement A of the dava was correctly dated: the amphora with the epigraphic stamp that was in use in Rhodes around 150 BC - on which the date of 150 BC for the beginning of Settlement A was based could have been brought to the dava at Popesti decades after the foundation of the latter - a possibility neglected by the earlier discussions about dating (Preda, Palincas 2004–2005, p. 78). At the same time, given this stamp of Dionnos, son of Pythodoros, it cannot be excluded that Settlement B was founded earlier than Settlement A.

During the excavation of the vault-pit for the Gheorghe family, a fragment of a brooch with frame-catch plate was found (Fig. 7). It belongs to type 6a of Rustoiu (1997, p. 39), which is the same as type 49 of Zirra (2017, p. 80-82); the latter subdivided the type according to the characteristics of the spring, but as this is mostly missing in our piece, the attribution to variant is not possible. The type is dated to the 1st century BC by Rustoiu (1997, p. 39), and to the 1st century BC, possibly continuing into the 1st century AD

by Zirra (2017, p. 81–82). Unfortunately, its stratigraphic position is not certain. The notes and measurements made during the excavation (approx. 60 cm east of the western profile and 25 cm south of the northern profile, at approx. -1.40 m, in stratigraphic unit 18) place the brooch in the layer overlying the first living floor, about 10 cm east of the limit of the pits from the north-western corner of the excavated area. As the content of these pits was already partly emptied at the time of the excavation of the layer itself, the two should not have mixed. Doubts concerning the findspot arose from the fact that the layer was dug by spade, in a 30-cm spit, by the only worker present, while this author, the only archaeologist on the site, recovered the artefacts from the earth thrown out by the worker. The brooch was recovered at the very moment it was thrown out by spade, but a degree of imprecision as to the findspot could not be avoided. Also, the photograph of the rain-damaged surface (Fig. 4) shows a disturbance in the area (a possible animal burrow) that was not visible at the level of the third living floor, when we interrupted the work (comp. Fig. 6/d to Fig. 4), and it cannot be excluded that the brooch was found in this disturbed spot and thus does not belong to the earliest layer in the area (Fig. 5).

The jar found next to the daub screen or fence of the second (or third?) living floor from the Gheorghe vault-pit area (Fig. 9) is very frequent in all layers of Settlement A (with the highest frequency in LT II 2); it belongs to type 1 of jars after Trohani and is datable from the middle of the 2^{nd} century BC to the end of the 1^{st} century AD (Trohani 2008, p. 201–202).

The strainer found in the debris layer covering the decorated hearth V1 (Fig. 12), in the area beyond the vault-pit (when digging out the northern part of the hearth), belongs to type 1 by Sebastian Matei and dates broadly to the 2nd-1st centuries BC (Matei 2010, p. 95–96).

The aforementioned *skyphos* fragment, found dislocated (Fig. 16), dates to the 1^{st} century BC – 1^{st} century AD (dating by Mariana Cristina Popescu), and is thus the latest datable artefact found so far.

DISCUSSION

The dava: structure, functions and chronology

Until now it was believed that Settlement A of the dava differed from Settlement B in terms of structure, function and chronology. Settlement A was known as the sector 1) with the palace of the local ruler, where the public buildings were located and public rituals took place (hence the name of Acropolis given by R. Vulpe 1957, p. 227, fig. 1), situated 2) close to large workshops, and 3) otherwise occupied by surface houses each possessing a dugout used as a cellar, 4) inhabited by high-ranking Getae with access to luxury objects, mostly Hellenistic imports, and 5) dated between ca. 150 BC and the beginning of the Common Era; while Settlement B was one with 1) no public

buildings, 2) no large workshops, 3) with, probably, pit houses, 4) inhabited by lower-ranking people, only rarely possessing valuable objects, and 5) who moved here from the Acropolis, due to the overpopulation of the latter – i.e., it was founded later than Settlement A. The common elements of the two settlements were mainly limited to the use of the same types of mundane artefacts (pottery, iron utensils, etc.) and the presence of human body- or body part-depositions in pits (for the attribution of human bodies from Settlement A to the dava period see A. Vulpe, Gheorghită 1979, p. 96, 98).

The 2019–2020 excavations, with all their limitations, showed that Settlement B must have been similar in several ways in structure and function to the Acropolis or at least that the differences were less radical than previously believed. Settlement B also had at least one large, public building, most probably used for rituals but also perhaps for other gatherings (Fig. 19), while rituals – at least some of them – may have had some common elements in the two settlements as they entailed large buildings with decorated hearths and depositions of human bodies and body parts. Secondly, Settlement B seems to have had at least one workshop (for iron metallurgy), most probably near to the public building. The third trait, that of the characteristics of regular houses, is difficult to discuss at this stage: the lack of clear association of surface houses with dugouts in Settlement B could be due to the narrow excavated areas, while the lack of any analysis of the content of the dugouts prevents us from deciding whether they were regular dwellings or only cellars. The fourth trait – i.e., the wealth of the population as measured by the number of luxury items - could also depend on the state of research on Settlement B, given that, to the Thasos tetradrachms found in 1976–1977 (A. Vulpe, Gheorghiță 1979, p. 96–98), in 2019–2020 other valuable items were added: a considerable number of (fragments of) imported amphorae and a fragment of a skyphos.

One of the widely discussed traits of the dwelling in Settlement A that needs considering in relation to Settlement B is the presence of pottery of Hellenistic influence, both direct imports as well as Getic imitations. Imported Hellenistic clay vessels are primarily transport amphorae (mostly from Rhodes, many from Kos, etc.), but also hemispherical cups decorated with reliefs and other types of vessels, indicating import of Aegean wine (albeit seemingly not in large quantities) as well as the adoption of certain fashionable Hellenistic pottery and, ultimately, culinary taste (Eftimie-Andronescu 1967, p. 416; R. Vulpe 1976, p. 76; Opaiţ 2013, p. 22-24, 27, 50). Among the Getic imitations of Hellenistic clay wares are transport amphorae (mostly Rhodian) (R. Vulpe 1976, p. 76; Opait 2013, p. 25–26; Streinu 2016), relief-decorated hemispherical cups (A. Vulpe, Gheorghiță 1976; Popescu 2000) and wheel-made, red fired, large pithoi (e.g., R. Vulpe 1961, p. 328; R. Vulpe, 1976, p. 76; Opaiţ 2013, p. 49–51). These three categories are so numerous at Popești that it has long been argued that there must have been a local

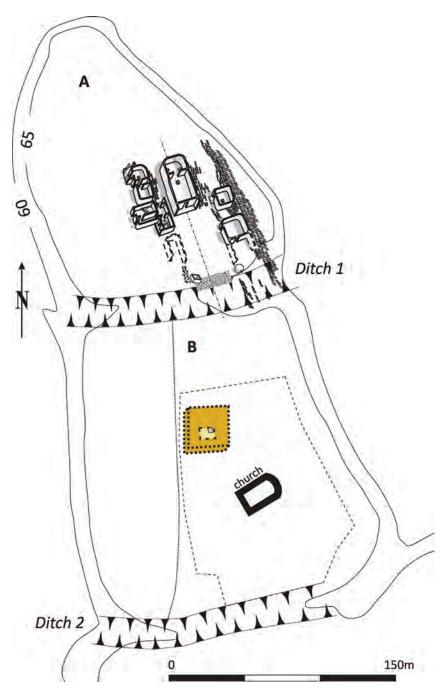


Figure 19. Popeşti. Tentative reconstruction of the areas with public buildings. With colours: approximate location of the building(s) remains with the decorated hearth and other architectonic La Tène elements unearthed in 2020. The rest: combined from Vulpe 2004–2005, fig. 2, left and fig. 7, which reproduces the axonometry by Dinu Antonescu 1978.

centre of production (for amphorae: Eftimie-Andronescu 1967, p. 401, n. 1; A. Vulpe, Gheorghiță 1986, p. 47, 50, pl. IV, for a possible subsidiary production centre at Schitu-'La Rotundu', approx. 15 km from Popești; for hemispherical cups with relief decoration: A. Vulpe, Gheorghiță 1976, p. 180; Conovici 1978, p. 165; for pithoi: Opaiţ 2013, p. 49). More recently, other aspects of Hellenistic influence were added. One is the likely presence of Greek potters as deduced from the technological knowledge necessary for the production of large pithoi and the use of Greek

letters to mark some of them (Opaiţ 2013, p. 49; at the same time, Egri's idea that the typically Mediterranean motifs on the earliest relief-decorated hemispherical cups and the probable direct learning of the mould-casting technique [Egri 2014a, p. 238] are the results of direct contact between Greeks and Getae needs further proof). The other is the acclimatization of the grapevine of East Mediterranean origin as deduced from the large number of imitation amphorae, explicable only through the need to store and transport locally-produced wine that could

be kept for more than a year – a quality that the local grapevine could not have had (Opaiț 2013, p. 28-29). What was stored in pithoi is still under debate (e.g., Matei 2010, p. 37-38, for Getic contexts suggests various liquids such as wine, water, milk and pickles, and only exceptionally grains; Stolba 2007, p. 157, referring to Greek contexts, considers pithoi as vessels used primarily for wine fermentation) and amphorae were certainly used for many commodities (Panagou 2016, Table 5, identified 35 different uses, as varied as wine, olive oil, water, fish products, nuts, fruit, resin/pitch, etc.; pace Opaiţ 2013, p. 23, who restricts their content to wine, oil and fish). Nevertheless, it is generally agreed that the most frequent use in both cases was wine (Opait 2013, p. 23-27 and passim; for Greek contexts, see, e.g., Stolba 2007; Panagou 2016), so that Settlement B appears as an area of large-scale wine preparation, storage, consumption and trade. The same could be said of Settlement A with the only difference that in the latter there are instances of pithoi found in groups (R. Vulpe 1959, p. 310, fig. 5). More important than these similarities and differences are the data that the cemetery area could provide on the role of wine production in the development of Getic economy and politics as it was argued that the production of local high-quality wine is part of a process of transition from a subsistence economy to one that produces and markets surpluses (Opaiţ 2013, p. 29) and that wine played an important role in feasts and, consequently, in the prestige and consolidation of the power of local basilei (Opaiț 2013, p. 41–42, 51). Yet, in Transylvania wine was scarce, always imported via or from the outer Carpathian regions and seemingly confined to the most privileged. Even so, it seems to have played a role in feasting and consolidation of the power of local rulers (Egri 2014b, p. 60-61). The organization of Getic wine production is particularly important in this context. The distribution of the many pithoi- and amphora fragments in the cemetery area at Popești indicates that probably different households participated in this large-scale wine production. Alongside the organization of other crafts in this dava (ceramics- and iron production) as well as rituals, the analysis of wine production and circulation can contribute to an understanding of the social organisation and political negotiations that ultimately led to the formation of the first Geto-Dacian state. This intertwining of crafts, trade and politics suggests that heterarchical relationships were important in Dacia alongside hierarchy (for the concept of heterarchy and case studies see, e.g., Kohring, Whynne-Jones 2007; Crumley 2015). Nevertheless, this social complexity is poorly researched and, consequently, it is too early to decide whether the Dacian society of the 1st century BC was hierarchical as opposed to heterarchical – as suggested by Rustoiu and Ferencz (2018, p. 128).

As to the fifth trait by which Settlements A and B were compared – that is the chronology of Settlement B, and its foundation in particular – the most important question is how do the layers identified in various parts of the cemetery correlate internally as well as with the

layers in Settlement A. As noted in the campaigns of 1976–1977 and 1991 in the areas close to the cemetery, the bulk of material recovered from the excavations is typical of the 2nd-1st centuries BC, and - at least in the absence of detailed analysis - does not allow more refined dating. A. Vulpe's and Gheorghiță's (1976) statement that Settlement B came into being following the overpopulation of Settlement A is a mere impression based on how they interpreted the data then available. From the 2019–2020 excavations, it emerges that the habitation in Settlement B was of much longer duration than previously believed, as the thickness of the archaeological deposits and the many superimposed living floors show. The Greek stamp of Dionnos, son of Pythodoros, on the handle of the imitated Rhodian amphora suggests that Settlement B was founded at the same time as Settlement A or even earlier, but it does not provide an exact chronological marker as the dating depends on how long the vessel has been in use. The Vârteju-București coin (Fig. 18) places the pit in Settlement B at the chronological level of the first three (LT II 1–3) or at least of the second and third living floors (LT II 2-3) in Settlement A, but there is no way to ascertain that it did not get into the pit at a later time. On the other hand, the iron brooch with frame-catch plate has not been found anywhere in contexts earlier than the beginning of the 1st century BC so that this date becomes a terminus post quem for the earliest of the series of large buildings in the area with a decorated hearth, but only assuming the brooch belongs indeed to the first dwelling layer in Settlement B (which is not certain, as argued above). In short, so far there are no strong arguments to support or reject A. Vulpe's and Gheorghiță's opinion that Settlement B was founded after Settlement A. If the earliest habitation in Settlement B is proven to have been contemporaneous with that in Settlement A, the implication is that the dava did not start in a small area like that in Settlement A and expanded over time, but was laid out as a large urban settlement from the beginning.

In sum, what is argued here based on the 2019–2020 preventive excavations, is not that we should imagine Settlement B as having the same structure and functions as Settlement A/the Acropolis and that this was not previously noticed owing to the narrow trial trenches that accidentally fell between the major habitation remains. Rather, what we found in various parts of the cemetery area necessitates replacing the earlier image of the dava at Popești as one composed of the Acropolis in Settlement A surrounded by the modest dwelling quarters of the commoners in Settlement B, with that of a complex urban settlement in which both Settlement A and B had neighbourhoods specialized in different crafts, participating in long-distance trade and had large buildings where public rituals and possibly gatherings took place. The earlier excavations in Settlement B must be interpreted in light of this new image rather than considered of little relevance. Much work is needed to understand the details of these neighbourhoods and how they were articulated in the complex structure of the *dava*, but advancing with this research will certainly help us understand the remarkable achievement that was the formation of the first Dacian state.

The archaeological research in the cemetery area

From the description above it emerges that, unfortunately, most archaeological data from the cemetery area is lost forever because those who by law should have monitored activity in the cemetery and take legal action failed to do so promptly. In part, this reflects the lack of appropriately-qualified personnel in the Giurgiu County Department for Culture and the lack of interest of the mayor and staff of the town hall (before 2000 the town hall employees were mostly locals and aware of the existence of this important site, but by 2019 hardly anyone was a local and only a few knew that the site existed and then not from first-hand experience, but from the Internet).

Why the excavation team did not notice the situation is not easy to explain, at least for the period before 2000 when the previous excavation directors were still living. Part of the explanation surely rests in the shortage of archaeologists and funding for excavations and primary documentation of the findings - perpetual issues in Romanian archaeology –, which directed the attention of the staff towards the difficulties of processing the data for the site monograph series, but there were also other context-dependent reasons. One can only guess that in the 1950s and early 1960s, when the Communist Party showed a keen interest in archaeological research and the director of excavations was Radu Vulpe, he focused on the Acropolis, with its rich finds, and neglected the cemetery because in his trial excavations he found only slight traces of habitation and, at that time, most burials were made in the southernmost part of the cemetery area, known at that time as 'The old cemetery'. Also, Radu Vulpe was not on the best of terms with the Communist authorities, so it is possible that he considered he could not do more for the site than he had. Settlement A remained the main area of interest also for Alexandru Vulpe, site director between 1976 and 2000, although in this period the cemetery expanded from the 'old cemetery' closer to its present-day dimensions. As presented above, the longitudinal and transverse profiles he obtained for Settlement B in 1976–1977 and 1991 – from which that in 1977 was placed in the northern part of the cemetery – yielded an archaeological deposit that was far less rich than that in Settlement A and was getting thinner toward the south. This, given the small team and limited funding, may not have been tempting enough compared to what excavations in Settlement A had to offer. However, A. Vulpe recognized that Settlement B was quite densely inhabited in the dava period (A. Vulpe, Gheorghiță 1979, p. 95, 98). Here, one has to recognize his cultural-historical orientation – i.e. his interest in linking archaeological data to the information provided by the antique texts – and his rather limited interest in a more anthropologically oriented

archaeology, which made him pay less attention to the habitation traces of the commoners, as Settlement B was believed to be. Moreover, he was more concerned with how to organize the restoration, primary documentation and interpretation of the huge quantities of data and the writing of the site monograph series than with the site itself. Importantly, soon after 1988, when he managed to assemble an excavation team, everyone's attention was diverted from the wider problems of the site because of inner tensions due to different excavation techniques and skills and to unequal allotment of tasks, including those related to the site monograph. By 2000, when the present author became site director, a variety of old and newer problems had arisen. Under the circumstances, a new approach was taken: after finishing a project handed down by A. Vulpe (the excavation of a well in Settlement A, a technically challenging enterprise given the topographic configuration of the site: Palincaş and Lippert 2003; Palincaș 2011, p. 213), and reminding the local priest of his legal obligation to request archaeological assistance for every new burial (which until 2001 seem to have occurred at a rate of approx. 3-4/year, and rarely any during the excavation campaigns), the fieldwork was halted and the effort focused on the primary documentation and publication of the site monograph series. The new project director's specialization in prehistoric archaeology (i.e., the pre-dava habitations) and the need to conduct research to international standards – around 2000 the vast majority of Romanian archaeologists worked in a paradigm about 40 years behind the mainstream archaeology (e.g., Palincaș 2003; 2004–2005; 2006a; 2006b; 2010; see also Anghelinu 2004; Niculescu 2004–2005) – diverted her attention from the changes in the field, while the only member of the excavation team working on the La Tène settlement (George Trohani) focused on the publication of the pottery. The excavations from 2009 did not change this approach to the cemetery area as the La Tène remains were not impressive and, more importantly, they were heavily affected by mediaeval construction works. Another, unforeseen factor, made worse the situation on the site: the local population had aged and the number of burials increased, taking up free space in the northern part of the cemetery, previously used for small-scale agriculture.

Thus, by 2019, the site had been altered in several ways, among which the extension of the area used for burials and the filling of the western part of the second ditch (first, to build an asphalt road and then to extend the agricultural plot of a local) are the most damaging changes.

OUTLOOK

Given the importance of the remains of the Getic dava from the cemetery area, action is needed urgently to prevent destruction and conduct field research. If opening a new village cemetery and halting activity in the current one -i.e., the best solution at present -i.e. is not possible,

then funding for excavations – in whatever legally possible form – should be granted by the relevant authorities: the Ministry of Culture, the town hall in Mihăilești, Giurgiu County Council, according to the Monument protection law 422/2000 and the Romanian Academy, according to its statues (Statutes of the Romanian Academy, Art. 6: 1-2, 4). Even if funding were available, the task of carrying out such an excavation would be difficult, given the shortage of archaeologists with relevant expertise, the shortage of a labour force for the less specialised tasks, and the inevitable time pressure on an excavation in an intensively used area that would not allow many technically advanced observations (e.g., reconstruction of activity areas by analysing botanical remains or soil chemistry: Chernysheva et alii 2015; Hodgkinson, Lelek Tvetmarken 2020, etc.). Until the implementation of either of these solutions, the field research has to be carried out in much the same way as in 2019–2020 – i.e., with grave-pit excavations announced from one day to the other and limited to one workday, and vaults excavated under extreme time pressure whilst neglecting the in situ areas around them. And this with even less institutional support than before: for the next three years, one of the archaeologists who helped with the excavations is not permitted to continue, by order of the director of the Institute of Archaeology – a loss that is important especially as he happens to be the only team member with a car - an important asset at all times, let alone during the COVID-19-crisis. At the same time, the other participating archaeologist is a member of another excavation team. Moreover, apart from the problem of the cemetery area outlined above, many other issues need to be resolved on the study site. The site needs to be given legal protection, and the local police need to prevent ground interventions by treasure hunters as well as car races on the slopes of Settlement A; Settlement B needs to be cleared of the trash that has been dumped there; an illegal building in the second ditch needs to be demolished; the earth with which a local filled the western part of the second ditch needs to be removed – tasks that fall, according to Romanian law, to the mayor, who nevertheless does not fulfil them so that constant supervision of the site and much paperwork is needed on the part of the project director. Furthermore, preventive excavations will be needed in Settlement C for the installation of gas pipes, whenever a new house, outhouse, etc., is built. And it is worth highlighting that these would be the first archaeological excavations to be carried out in Settlement C and would provide the first information on this part of the dava. In parallel with this field- and paperwork, the much-awaited monograph series of the site needs to be prepared for publication.

ACKNOWLEDGEMENTS

I wish to thank my colleagues Mr Cătălin I. Nicolae and Mr Dorin Sârbu for their help with the excavations at Popești and their outstanding professional ethics. I offered them co-authorship of this paper, but the former felt unable to participate in the specialist discussion in this paper

as it is outside his area of expertise, and the latter declined on account of the limited amount of work he did so far. I am also indebted to Dr Mariana Cristina Popescu for the data on the *skyphos* fragment, to Prof. Alexandru Avram (†) for dating the stamped amphora handle, to Mrs Iuliana Barnea for help with the illustrations, to Mrs Ileana Zahariade and Ms Georgiana Mureşan for restoration of some of the artefacts as well as to my colleagues, Dr Raluca Iosipescu and Dr Andrei Măgurenu, to chief inspector Silvia Stan from the Giurgiu County Police Department and to Mr Cătălin Voivozeanu for help with the site on several occasions. I am particularly thankful to Prof. Clive Bonsall for annotating the text.

REFERENCES

- Alexandrescu 1980 A. D. Alexandrescu, *La nécropole gète de Zimnicea*, Dacia NS 24, 1980, p. 19–126.
- Anghelinu 2004 M. Anghelinu, Evoluția gândirii teoretice în arheologia românească. Concepte și modele aplicate în preistorie, Târgoviște, 2004.
- Buzoianu, Bărbulescu 2008 L. Buzoianu, M. Bărbulescu, *Albeşti. Monografie arheologică. I*, Constanta, 2008.
- Chernysheva et alii 2015 E. V. Chernysheva, D. S. Korobov, T. E. Khomutova, A.V. Borisov, *Urease activity in cultural layers at archaeological sites*, JAS 57, 2015, p. 27–31.
- Conovici 1978 N. Conovici, Cupele cu decor în relief de la Crăsani şi Copuzu, SCIVA 29, 1978, 2, p. 165–183.
- Crumley 2015 C. L. Crumley, *Heterarchy*, in: R. Scott, S. Kosslyn, *Emerging trends in the social and behavioral sciences*, Hoboken (NJ), 2015, p. 1–14, doi: 10.1002/9781118900772.etrds0158.
- Eftimie-Andronescu 1967 V. Eftimie-Andronescu, *O stampilă pe o amforă de producție locală cu imitarea literelor grecești*, SCIV 18, 1967, 3, p. 401–421.
- Egri 2014a M. Egri, Desirable goods in the Late Iron Age The craftsman's perspective, in: S. Berecki (ed.), Iron Age Crafts and Craftsmen in the Carpathian Basin. Proceedings of the International Colloquium from Târgu Mureş, 10–13 October 2013, Bibliotheca Musei Marisiensis. Seria Archaeologica 7, Târgu Mureş, 2014, p. 233–248.
- Egri 2014b M. Egri, Mediterranean wine and Dacian conviviality. Ancient and Modern Myths and archaeological evidence, in: C. N. Popa, S. Stoddart (eds), Fingerprinting the Iron Age. Approaches to identity in the European Iron Age. Integrating South-Eastern Europe into the debate, Oxford (UK) Havertown (PA), 2014, p. 49–62.
- Fischer 1996 C. Fischer, *Probele* ¹⁴C din valul de epoca bronzului de la Popești, jud. Giurgiu, SCIVA 47, 1996, 3, p. 289–295.
- Fischer 2000 C. Fischer, *Die ¹⁴C-Daten aus dem bronzezeitlichen Wall von Popeşti (Jud. Giurgiu)*, in ArchKorr 30, 2000, 2, p. 227–229.
- Haită 2003 C. Haită, Sedimentologie şi micromofologie. Aplicaţii arheologice, Târgovişte, 2003.
- Hodgkinson, Lelek Tvetmarken 2020 A. K. Hodgkinson, C. Lelk Tvetmarken, *Approaches to the analysis of production activity at archaeological sites*, Oxford, 2020.
- Kohring, Whynee-Jones 2007 S. Kohring, S. Whynne-Jones (eds), Socializing complexity. Structure, interaction and power in archaeological discourse, Oxford, 2007.
- Leahu 1965 Săpăturile arheologice de la Cățelu Nou, CAB 2, 1965, p. 11–74.
- Makiewicz 1976 T. Makiewicz, Ottarze I "paleniska" ornamentowane z epoki żelaza w Europe (Ornamented altars and "firebeds" from the Iron Age in Europe), Przeglądu Archeologicznego 24, 1976, p. 103–193.
- Matei 2010 S. Matei, *Ceramica geto-dacică din nord-estul Munteniei* (sec. II a. Chr. I p. Chr.), unpublished PhD thesis, University of Bucharest.
- Matei, Măgureanu 2014 S. Matei, D. Măgureanu, *Public space private space in the dava of Cârlomăneşti, Buzău County*, Mousaios 19, 2014, p. 219–240.
- Morintz 2013 A. S. Morintz, On a possible function of the geto-dacian decorated hearths, in: C. Schuster, O. Cîrstina, M. Cosac,

- G. Murătoreanu (eds), The Thracians and Their Neighbors in the Bronze and Iron Ages. Proceedings of the 12th International Congress of Thracology, Târgovişte, 10th–14th September 2013, vol. 1: Settlements, Fortresses, Artifacts, Târgovişte, 2013, p. 255–267.
- Morintz, Rosetti 1959 S. Morintz, D. V. Rosetti, *Din cele mai vechi timpuri şi până la formarea Bucureștilor*, in: I. Ionașcu (ed.), *Bucureștii de odinioară, în lumina săpăturilor arheologice*, București, 1959, p. 11–47.
- Niculescu 2004–2005 Gh. A. Niculescu, *Archaeology, nationalism and 'The History of the Romanians' (2001)*, Dacia NS 48–49, 2005–2005, p. 99–124.
- Opaiţ 2013 A. Opaiţ, Producţia şi consumul de vin în ţinuturile dintre Carpaţi şi Marea Neagră (secolele II a. Chr. – III p. Chr.). Unele consideraţii, SCIVA 64, 2013, 1–2, p. 21–65.
- Palincaş 1996 N. Palincaş, Valorificarea arheologică a probelor ¹⁴C din fortificația aparținând Bronzului târziu de la Popești, județul Giurgiu, SCIVA 47, 1996, 3, p. 239–288.
- Palincaş 2000 N. Palincaş, Archäologische Auswertung der 14C Proben aus einer spätbronzezeitlichen befestigten Siedlung von Popeşti (Rumänien), ArchKorr 30, 2000, 2, p. 209–226.
- Palincaş 2003 N. Palincaş, Asupra cauzelor nerestructurării cercetării în arheologia românească, in: Perspective ale interdisciplinarității în arheologia românească, Masa rotundă de la Târgoviște 23–24 mai 2003, organizat de Facultatea de Ştiinţe Umaniste a Universității "Valahia", Târgoviște și de Muzeul Naţional de Istorie a României, Târgoviște, 2003, rezumat: p. 28–30.
- Palincaş 2004–2005 N. Palincaş, Social Status and Gender Relations in Late Bronze Age Popeşti. A plea for the introduction of new approaches in Romanian archaeology, Dacia NS 48–49, 2004–2005, p. 39–53.
- Palincaş 2006a N. Palincaş, *On Power, Organisation and Paradigm in Romanian Archaeology before and after 1989*, Dacia NS 50, 2006, p. 7–56
- Palincaş 2006b N. Palincaş, Conceptul de cultură arheologică și gândirea normativă. Notă scrisă pentru arheologia românească de azi, SCIVA 57, 2006, p. 159–185.
- Palincaş 2010 N. Palincaş, *Conceptul de cultură și diversele direcții în arheologie*, in : M. Petrescu-Dîmboviţa, A. Vulpe (coord.), *Istoria Românilor*, vol. I, Bucureşti, 2010, ed. 2, p. 53–58.
- Palincaş 2011 N. Palincaş, The archaeological site at Popeşti (Co. Giurgiu) at the crossroads between research, conservation, and public archaeology, Caiete ARA 2, 2011, p. 209–215.
- Palincaş, Lippert 2003 N. Palincaş, A. Lippert, Ausgrabungen eines latènezeitlichen Brunnens von Popeşti (bei Bukarest, Rumänien), Archäologie Österreichs 14, 2003, 2, p. 59–63.
- Palincaş et alii 2010 N. Palincaş, D. Sârbu, C. E. Ştefan, Popeşti, oraş Mihăileşti, jud. Giurgiu, Punct: Biserica "Sfânta Treime", CCA, campania 2009, http://www.cimec.ro/Arheologie/cronicaCA2010/cd/index.htm, No. 176.
- Palincaş et alii 2020 N. Palincaş, C. I. Nicolae, D. Sârbu, *Popeşti, oraş Mihăileşti, jud. Giurgiu*, CCA, campania 2019, p. 500–503.
- Palincaş, Avram (forthcoming) A Greek stamp on a handle of an imitation Rhodian amphora found in the North-Thracian dava at Popeşti, north of the Danube (forthcoming).
- Panagou 2016 T. Panagou, *Transport amphoras and their contents*, in: S. Drugu, M. Giannopulu, Ch. Kallinē (eds), *Ēchadin: timētikos tomos qia tē Stella Drugu*, vol. II, Atena, 2016, p. 313–334.
- Petolescu 2001 C. Petolescu, *Originea numelui râului Argeş*, Argessis 10, 2001, p. 21–23.
- Popescu 2000 C. Popescu, *Original și imitație în cultura materială a geto-dacilor. Boluri cu decor în relief,* Angustia 5, 2000, p. 235–294.
- Popescu 2013 C. M. Popescu, Hellenistic and Roman Pottery in Pre-Roman Dacia, București, 2013.
- Preda 1973 C. Preda, *Monedele geto-dacilor*, București, 1973.
- Preda, Palincaş 2004–2005 C. Preda, N. Palincaş, *A tetradrachms hoard from Settlement 'A' at Popeşti*, district Giurgiu, Dacia NS 48–49, 2005–2005, p. 77–98.

- Roskams 2001 S. Roskams, *Excavation*, Cambridge Manuals in Archaeology, Cambridge, 2001.
- Rustoiu 1996 A. Rustoiu, Metalurgia bronzului la daci (sec. II î. Chr. sec. I d. Chr.). Tehnici, ateliere și produse de bronz, București, 1996.
- Rustoiu 1997 A. Rustoiu, *Fibulele din Dacia preromană (sec. II î. e. n.– I e. n.)*. Bucuresti. 1997.
- Rustoiu, Ferencz 2018 A. Rustoiu, I. V. Ferencz, Burebista at the Banat's Danube. Archaeological and historical data regarding the evolution of settlements in the Iron Gates region in the 1st century BC, Banatica 28, 2018, p. 123–149.
- Sîrbu et alii 2020 V. Sîrbu, N. Conovici, I. Cernău, Sacred area in the Dacian dava from Crăsanii de Jos Piscul Crăsani (Ialomiţa County), in: V. Sîrbu, A. Peţan (eds), Temples and Cult Places from the Second Iron Age in Europe. Proceedings of the 2nd International Colloquium "Iron Age Sanctuaries and Cult Places at the Thracians and Their Neighbors", Alun (Romania), 7th 9th May 2019, Alun, 2020, p. 179–207.
- Statutes of the Romanian Academy Statutul Academiei Române: Monitorul Oficial nr. 617/14 sept., 2009 (http://www.cdep.ro/pls/legis/legis pck.htp act text?idt=101044.
- Stolba 2007 V. F. Stolba, Local Patterns of Trade in Wine and the Chronological Implications of Amphora Stamps, in: V. Gabrielsen, J. Lund (eds), The Black Sea in Antiquity: Regional and Interregional Economic Exchanges, Aarhus, 2007, p. 149–159.
- Streinu 2016 A. Streinu, Revisiting some regional amphora imitations discovered at Popești from the Bucharest Municipality Museum Collection, RCAN 2, 2016, p. 111–126.
- Şerbănescu, Schuster 2020 D. Şerbănescu, C. Schuster, *Getae cult places* and objects in the Lower Argeş River Basin (Romania), in: A. Peţan, V. Sîrbu (eds), *Temples and Cult Places of the Second Iron Age in Europe*, Alun, 2020, p. 283–320.
- Şerbănescu et alii 2009 D. Şerbănescu, C. Schuster, A. S. Morintz, Despre vetrele-altar din dava de la Radovanu Gorgana a doua, jud. Călărași, România, in : A. Zanoci, T. Arnăut, M. Băţ (eds), Studia archaeologiae et historiae antiquae, Chişinău. Doctissimo Viro Scientiarum Archaeologiae et Historiae Ion Niculiţă, anno septuagesimo aetatis suae, dedicatur, Chişinău, 2009, p. 245–254.
- Trohani 1975 G. Trohani, Raport asupra săpăturilor arheologice efectuate în așezarea geto-dacică de la Vlădiceasca, jud. Ilfov, în anul 1973, CA 1, 1975, p. 151–175.
- Trohani 1986 G. Trohani, *Influences héllenistiques dans la décoration des âtres géto-daces*, Ancient Macedonia 4, 1986, p. 661–666.
- Trohani 2005 G. Trohani, Locuirea getică din partea de nord a Popinei Borduşani (com. Borduşani, jud. Ialomiţa), vol. I, Târgovişte, 2005.
- Trohani 2008 G. Trohani, Aperçu sur les vases conteneurs des géto-daces en Munténie, CCDJ 25, Theme issue in: A. Avram, V. Lungu, M. Neagu (eds), Filias Xarin. Mélanges à la mémoire de Niculae Conovici, Călăraşi, 2008, p. 195–223.
- Turcu 1979 M. Turcu, *Geto-dacii din Câmpia Munteniei*, București, 1979. Vulpe, A. 1997 – A. Vulpe, *Săpăturile de la Popești: Prezentarea*
- campaniilor 1988–1993, CA 10, p. 163–172.
- Vulpe, A. 2004–2005 A. Vulpe, 50 years of excavations at the pre- and protohistoric site at Popești, Dacia NS 38–39, 2004–2005, p. 19–37.
- Vulpe, Gheorghiţă 1976 A. Vulpe, M. Gheorghiţă, Bols à reliefs de Popeşti, Dacia NS 20, 1976, p. 167–198.
- Vulpe, Gheorghiţă 1979 A. Vulpe, M. Gheorghiţă, Şantierul arheologic Popeşti, com. Mihăileşti, jud. Ilfov. Raport preliminar asupra rezultatelor din campania anilor 1976–1977, CA 3, 1979, p. 95–104.
- Vulpe, Gheorghiţă 1981 A. Vulpe, M. Gheorghiţă, Şantierul arheologic Popeşti-Mihăileşti, jud. Giurgiu. Raport preliminar asupra rezultatelor din campaniile anilor 1978–1979, CA 4, 1981, p. 58–65.
- Vulpe, Gheorghiță 1986 A. Vulpe, M. Gheorghiță, Săpăturile arheologice din anii 1980, 1982 și 1983 din stațiunea getică de la Popești, com. Mihăilești, jud. Giurgiu, CA 8, 1986, p. 43–51.
- Vulpe, R. 1952 R. Vulpe, *Şantierul Poiana*, SCIV 3, 1952, 1, p. 191-230. Vulpe, R. 1955 – R. Vulpe, *Şantierul arheologic Popeşti – raport preliminar*, SCIV 6, 1955, 1–2, p. 239–269.

- Vulpe, R. 1957 R. Vulpe, *Şantierul arheologic Popeşti (reg. Bucureşti, r. Mihăileşti)*, MCA 3, 1957, p. 227–246.
- Vulpe, R. 1959 R. Vulpe, *Şantierul arheologic Popeşti*, MCA 6, 1959, p. 307–324.
- Vulpe, R. 1961 R. Vulpe, *Şantierul arheologic Popeşti*, MCA 7, 1961, p. 321–338.
- Vulpe, R. 1962 R. Vulpe, Şantierul arheologic Popești (r. Drăgănești-Vlașca, reg. București), MCA 8, 1962, p. 457–461.
- Vulpe, R. 1976 R. Vulpe, *Argedava*, in: R. Vulpe, *Studia thracologica*, Bucureşti, 1976, p. 69–79.

Zirra 2017 – V. V. Zirra, Fibule de schemă La Tène din România, Craiova, 2017.

Internet sources:

- http://www.recensamantromania.ro/rezultate-2/ Populația stabilă pe judeţ, municipii, orașe și localităţi componente la RPL 2011 (last view: April 12, 2021).
- https://www.magnetic-declination.com/locations.php?cc=RO&alpha= p&p=21 – Find the magnetic declination at your locality: Romania (last view: April 12, 2021).