

Looking around the tell-settlements. A view from Southern Romania

Radian-Romus ANDREESCU*

Katia MOLDOVEANU*

Abstract: Tell-settlements are a constant reality at the Lower Danube during the 5th millennium BC. Over more than a century and a half, the archaeological researches focused on the tell-settlements themselves, therefore the surrounding area was usually left unsearched. Despite this, both old and new researches summarily investigated also the area around tell-settlements. In this way, traces of habitation related with the main tell-settlement were also revealed.

Unfortunately, due to small scale excavations, the function of these habitations is not very clear at the moment. Hypothesis like economic activities areas or extensions of the tell habitation due to demographic pressure must be verified through large scale researches. The existence of habitations around tell-settlements completes the dynamic of inhabited space during Eneolithic period at the Lower Danube, a complex space which proves that tell-settlements were not the only habitation form.

Rezumat: Așezările de tip tell reprezintă o realitate constantă la Dunărea de Jos de-a lungul mileniului V BC. Timp de multe decenii cercetările arheologice s-au concentrat asupra interiorului acestor așezări, zona din jurul tellurilor fiind de obicei necercetată. Cu toate acestea, cercetările arheologice, unele mai vechi, altele recente, au investigat sumar și zonele din jurul tellurilor. Astfel, au fost scoase la lumină urme ale unor locuiri legate de cea principală din așezarea de tip tell.

Din păcate, din cauza săpăturilor făcute pe scară mică, funcția acestor locuiri nu este prea clară în acest moment. Ipoteze precum cele ale unor zone de activități economice sau extinderi ale locuirii din tell în condiții de presiune demografică trebuie verificate prin cercetări pe scară mare. Existența unor locuiri în jurul tellurilor completează dinamica ocupării spațiului eneolitic la Dunărea de Jos, un spațiu complex în care se dovedește că tellurile nu erau singura formă de locuire.

Keywords: tell-settlements, habitation around tell-settlements, habitation dynamic, Eneolithic, function.

Cuvinte cheie: așezări de tip tell, locuire exterioară, dinamica locuirii, eneolitic, funcție.

◆ Introduction

Tell-settlements are one of the most striking ways of living at the Lower Danube in the 5th millennium BC. The main characteristic of this type of settlement is a long habitation period on a limited area, many times separated from the rest of the ground by a ditch and/or an earthen bank. The result is a mound, of several dimensions, usually placed in the river flood plain and more rarely on the terrace.

Tell-settlements from the Lower Danube draw attention to archaeologists from earlier times due to their visibility and therefore the easy way of identification in the field. The researches concentrated on tell-settlements because of the richness of archaeological materials (ceramics, tools made of stone, bone, antler and copper, adornments, bones) gathered over the

* National History Museum of Romania, Calea Victoriei 12, 030026, Bucharest, Romania; radianromus@gmail.com; katia.moldoveanu@gmail.com.

centuries during which the settlements existed. They offered information about the chronological-cultural frame of the Neolithic Age because of the overlying of settlements illustrating the different evolution phases of the Neolithic cultures.

Therefore the area around tell-settlements was less investigated, even though the old archaeological researches reported habitation traces around these settlements.

◆ Objectives and terminology

The aim of this paper is to (re)evaluate the discoveries and theories about tell-settlements and the other habitations around them.

In this regard, some terminological specifications must be clarified regarding what we understand by habitations around tell-settlements. The term 'tell' or 'tell-settlement' is widely spread in the literature. From an etymological point of view, the term comes from Arabic language and it means artificial mound¹ (E. Rosenstock 2005, p. 221-222).

Over time, tell-settlements caused numerous discussions regarding the defining of this type of settlement. By the criteria used to define them, there are: place, size, origin etc.

This paper focus on the habitations located in the nearest area around the tell-settlements, bordering the limits of tell-settlements and contemporaneous with the habitation from the tell-settlements. This specification is needed because field researches revealed habitations around tell-settlements located at different distances from them (see below the example from Vitănești).

◆ Study cases from the Lower Danube

For this study we took in consideration the results of relative recent researches at the Lower Danube, which were also investigated through multidisciplinary investigations (e.g. geophysical survey, aerial photography etc.) In the same time, we studied the old investigations in order to identify the first data about the habitation around the tell-settlements (fig. 1).

The first effective information regarding a habitation located near a tell-settlement date from the 60's of last century. Thus two small size tell-settlements were identified at Teiu (Argeș County), in Northern Wallachia (I. Nania 1967, p. 8; S. Morintz 1962, p. 278).

The tell-settlement no. 1 at Teiu was researched in 1959 and 1963; it is placed in the flood plain of Mozacu river and it was a small-size settlement (40 m diameter, 1 m height), sheltering a small community of no more than 10 houses. Traces of habitations were identified on the Eastern terrace, but they were destroyed by agricultural works. The ceramic sherds and flint tools discovered on an area of tens of square meters were identical with the ones discovered on the tell-settlement. The remains of 15-20 houses were identified, and a hearth belonging to a dwelling with the dimensions of 5x3 meters is also mentioned. The big amount of burnt building material lead to the conclusion that it was constructed in the same way as those on the tell-settlement (I. Nania 1967, p. 21-22). On the basis of the researches made at Teiu, the archaeologist S. Morintz stated: 'the habitation belonging to Gumelnița culture is usually found on other spaces exterior to tell-settlements, like terrace margins from nearby'

¹ For the terminology regarding the names of artificial mounds in different languages from Near and Middle East, as well as South-Eastern Europe, see the above mentioned reference. These names appear as toponyms in all the mentioned area, e.g. *hoyuk*, *toumba*, *magoula*, *măgura*, *mogyla*, *măgor*.

(translated in English, after S. Morintz 1962, p. 282), emphasising the fact that the habitation was not limited to tell-settlements.

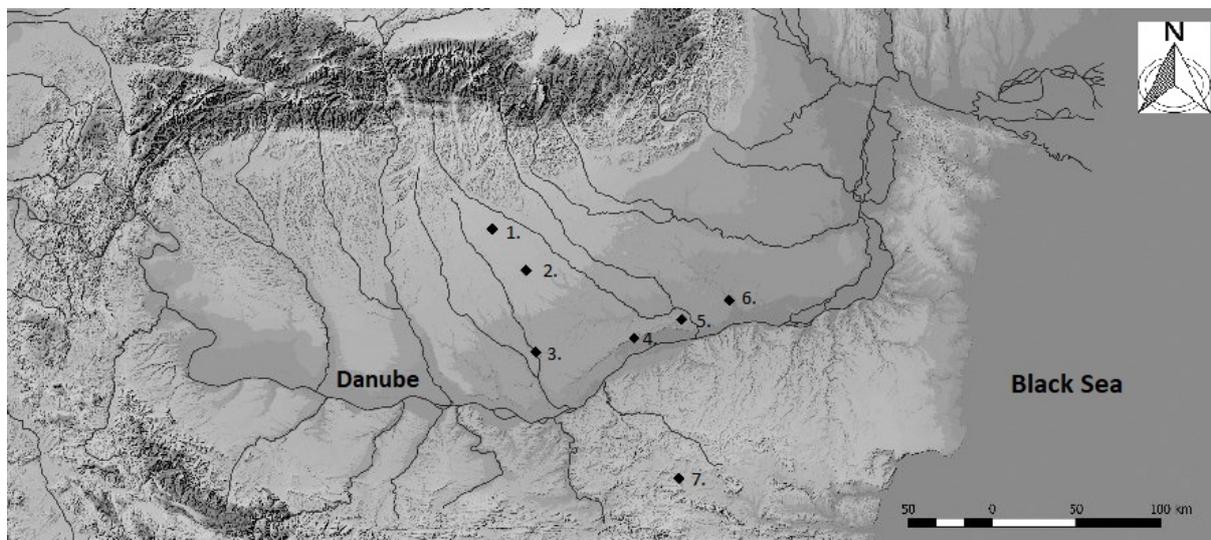


Fig. 1. Map of the main sites from Southern Romania mentioned in the text: 1. Teiu; 2. Vătași; 3. Vitănești; 4. Pietrele; 5. Radovanu; 6. Sultana; 7. Podgorica.

Harta principalelor situri din sudul României menționate în text. 1. Teiu; 2. Vătași; 3. Vitănești; 4. Pietrele; 5. Radovanu; 6. Sultana; 7. Podgorica.

Another example from Southern Romania is Radovanu (Călărași County), located at cca. 12 km distance from Danube Valley (fig. 2). The site has a special position, placed on a terrace extension with a height of 20 meters at the end of Coadelor Valley. The promontory is surrounded by steep slopes from three sides. The palynology analysis showed that the area surrounding the site was marshy in ancient times (E. Comșa 1990, p. 18-20).



Fig. 2. Radovanu: general view of the site from West, after E. Comșa, 1990, fig. 37.
Radovanu: vedere generală dinspre vest a complexului, după E. Comșa, 1990, fig. 37.

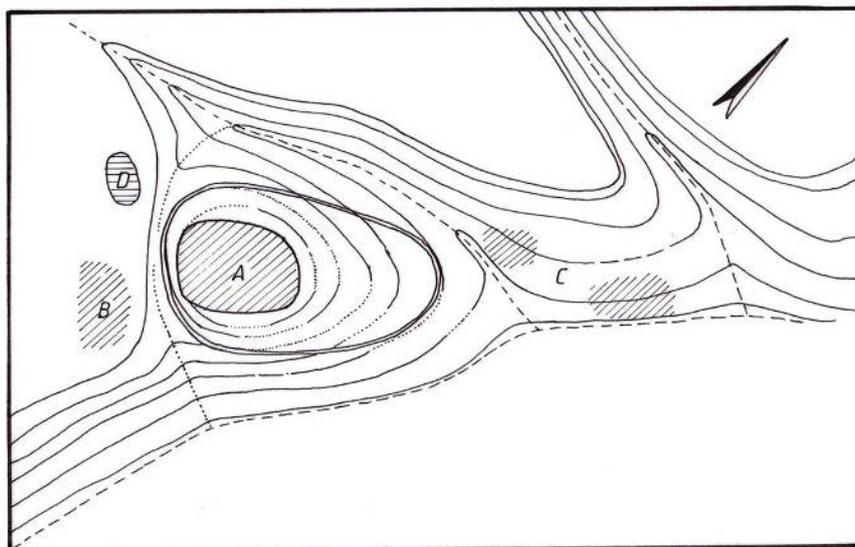


Fig. 3. Radovanu: sketch of the Neolithic site, after E. Comşa, 1990, fig. 29: A – the high, fortified settlement; B – ‘workroom’; C – the low, opened settlement; D – necropolis.
Radovanu: schița complexului neolitic, după E. Comşa, 1990, fig. 29: A – așezarea înaltă, fortificată; B – „atelier”; C – așezarea joasă, deschisă; D – necropola.

Archaeological researches undertaken in the period 1960-1985 which were made using multidisciplinary investigation methods (geophysical survey, aerial photography, ¹⁴C dating) lead to the discovery of many Neolithic habitations (fig. 3) (E. Comşa 1990, p. 68-80). Thus, four overlaid settlements were identified on the upper plateau, a terrace extension, with the dimensions of 50x70 m (‘A’ on the plan, see fig. 3), enclosed by a ditch and bank and belonging to ‘transition’ phase from Boian to Gumelnița cultures (first half of 5th millennium BC). Another habitation is placed in the low part of the plateau at its basis, on the smoothly slope of Coadelor Valley, without any enclosure (‘C’ on the plan, see fig. 3). The remains of two houses were found on this location, contemporary with one of the settlements identified on the tell-settlement. The sondages undertaken on the nearby Western terrace for the research of the necropolis (‘D’ on the plan, see fig. 3) also revealed the remains of two burnt houses (‘B’ on the plan, see fig. 3). A number of 36 loom weights were found inside the two mentioned houses, which were interpreted as ‘workrooms’. Even though the resources were not enough to continue the researches in this area, the author presumes that there were also other similar constructions.

Following the researches undertaken at Radovanu, E. Comşa concluded that this is not just a settlement, but a complex of habitations formed of: the high area on the terrace extension, the ‘workrooms’ area placed on the Southern margin of the nearby terrace, the necropolis located in the Western side of the tell-settlement and the low area on the smooth slope valley, with some surface dwellings (E. Comşa 1990, p. 69-70).

Taking in consideration his researches at Radovanu, E. Comşa confirmed the idea stated before by S. Morintz according to which the inhabitants of Southern Romania in the Neolithic period also used other spaces located around the tell-settlement: *‘The conclusion up to now that starting with the “transition phase” until the end of Gumelnița culture, every site was composed only of a tell-settlement is incomplete [underline by the author] and deforms the historical*

reality. In fact, in most of the cases ... there are archaeological sites formed by many settlements, like the example of *Radovanu*' (translated in English, after E. Comşa 1990, p. 70).

Relative recent archaeological researches brought new data regarding the habitation around tell-settlements.

One example is the tell-settlement at Vităneşti, located at 7 km East-North-East from Alexandria (Teleorman County).

Complex multi-disciplinary researches started here in 1993, having as aim the investigation of the settlement belonging to Gumelniţa culture and the reconstruction of the paleo-environment (R.-R. Andreescu *et alii* 2003, p. 74).

In the beginning, the research focused on the habitation from the tell-settlement, designated as 'Măgurice', with the dimensions of cca. 90x95 m at the base and a height of cca. 6 m, located on Teleorman Valley (fig. 4). The tell-settlement is placed at the basis of the terrace where the contemporary village is placed, being protected from the East and North sides by the terrace. The area around the tell-settlement is marshy due to some springs located at the basis of the terrace. Trying to make archaeological sondages around the tell-settlement failed because to the high level of the groundwater.



Fig. 4. Location of sites at Vităneşti: 1. Vităneşti – Măgurice / the tell-type settlement; 2. Vităneşti II / exterior habitation.

Localizarea siturilor de la Vităneşti: 1. Vităneşti – Măgurice / aşezarea de tip tell; 2. Vităneşti II / locuirea exterioară tellului.

In 1998, in the conditions of a drought summer, the attention of archaeologists was drawn by a slightly risen area, located in the Southern side of the tell-settlement, almost invisible until then due to the abundant vegetation (fig. 5). The area (which was designated as Vităneşti II) has cca. 50x40 m and it was surrounded by a small water course separating it from the tell-settlement. A sondage undertaken here in 1999 revealed ceramic sherds and remains of burnt building material (R.-R. Andreescu *et alii* 2000, p. 113).

The geo-physical survey undertaken in 2001 on a surface of cca. 1000 meters squares showed at least three area with magnetic anomalies, where it was possible to encounter traces of habitations or concentrations of archaeological materials (R.G. Dimitriu *et alii* 2002, p. 365-366). A 10x8 meters surface was dug in order to verify the data obtained by measurements. After the vegetal cover was removed, at a depth of 0.50 meters, remains of burnt building materials and concentrations of sherds appeared.



Fig. 5. Vitănești II: general view of the site taken from the tell-settlement.
Vitănești II: vedere de ansamblu a sitului luată de pe tell.

The remains of burnt building material seemed to form two distinct areas (fig. 6). These concentrations could come from one or two burnt buildings, but no hearths were discovered and the artefacts are very few. After the debris were excavated, several poles holes were identified, probably the substructure of buildings with an uncertain function (R.-R. Andreescu *et alii* 2013, p. 137-138).



Fig. 6. Vitănești II: buildings debris *in situ*.
Vitănești II: resturi de construcții *in situ*.

The archaeological material is strongly fragmented and belongs in majority to Gumelnița B1 phase, but also to the earlier phase, Gumelnița A2. There are also fragments which could attest an even earlier habitation, maybe Gumelnița A1. Besides, a ¹⁴C sample from a sheep molar places the habitation in the interval 4536-4367 cal.BC (RoAMS 62). Some ceramic fragments belong to Cernovodă III culture (4th millenium BC).

Other ceramic fragments belonging to Gumelnița culture were discovered at a distance of cca 200 meters South of Vitănești II site. Besides, little ceramic fragments, atypical, were discovered in the Eastern and Southern sides of the tell-settlement, in the ploughed areas. Some of them seem to be Neolithic, but no certain chronological determination could be made (unfortunately the private regime of these field obstructs the archaeological research).

Habitation traces from the same period of Gumelnița culture were discovered in areas located at different distances from the 'Măgurice' tell-settlement. Thus, over Teleorman river, near the Southern terrace, at about 1 km from the tell-settlement was found another site belonging to Gumelnița culture, designated as Vitănești III (R.-R. Andreescu, D.W. Bailey 2002, p. 197). Other habitation traces are found at about 1.5 km to the North-West, to the basis of the terrace, the site which is designated as Vitănești IV².

Another study-case regarding the habitation around tell-settlements is the site of Pietrele, Giurgiu County, located in the Danube Valley. Here, the researches focused on both the tell-settlement (fig. 7) and surrounding area.



Fig. 7. Pietrele: aerial view by Carmen Miu.³
Pietrele: fotografie aeriană realizată de Carmen Miu.

² Other sites with Neolithic materials were also discovered in the administrative area of Vitănești commune with the occasion of the researches made for the General Urbanistic Plan; for detailed information, see P. Mîrea and I. Torcică 2015.

³ Aerial photography (28.06.2008) made within the project *ArchaeoLandscape Europe, Programul Cultura 2007-2013 (CU7-MULT7, Strand 1.1 Multi-Annual Cooperation Projects)*. We thank to Mrs. Carmen Miu (Bem) for giving the permission to publish this image.

The geomagnetic researches undertaken starting with 2005 revealed the presence of cca. 80 structures in the North-Western area of the tell-settlement (fig. 8). The researches at Pietrele showed that the entire area, both the tell-settlement and surrounding area, were intensely used for different kind of activities and, in a certain moment, the settlement was much larger. Also, on the terrace South-West to the tell-settlement, at short distance, was discovered the necropolis of the settlement, comprising cca. 50 graves (M. Toderăș *et alii* 2009, p. 41-43).

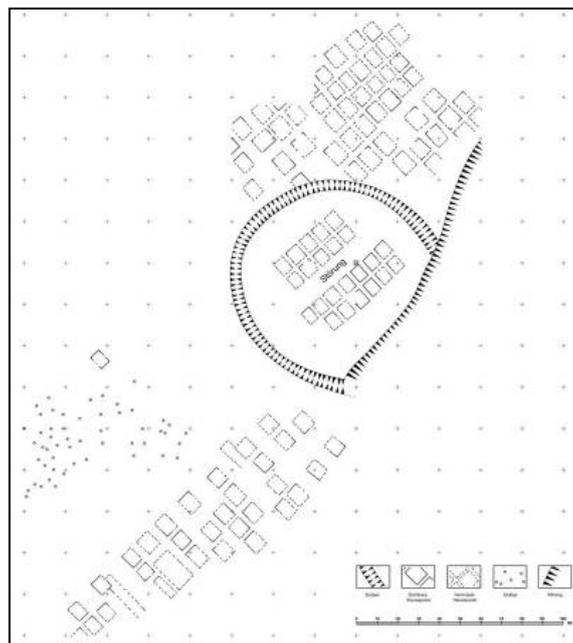


Fig. 8. Pietrele: The hypothetical plan of the settlement according with geomagnetic measurements results, after M. Toderăș *et alii* 2009, pl. III/2.

Pietrele: Planul ipotetic al așezării conform rezultatelor măsurătorilor geomagnetice, după M. Toderăș *et alii* 2009, pl. III/2.

The results of geomagnetic prospections for the area located in the nearby of the tell-settlement were verified by the opening of archaeological sondages and surfaces, giving important clarifications regarding the nature of the open and extended settlement that surrounds Pietrele mound. Thus, the archaeological evidence shows the existence of Neolithic settlements in the area North and West of the tell-settlement but we should keep in mind that the investigations did not reached the margins of the settlement yet. According to the studies on ceramics and ^{14}C dating, the constructions were not all of them contemporary, but their existence developed on a long period of time, cca. 750 years. In the Northern side of the settlement, the ceramic concentrations show an early phase of Boian culture (5207-5076 cal BC). Two buildings belonging to Gumelnița culture were researched in J surface, erected one on top of the other at a distance of cca. 100 years based on ^{14}C dating, proving that the land was parcelled also in the exterior of tell-settlements (S. Hansen, M. Toderăș 2012, p. 127-130).

Another study-case is the tell-settlement from Sultana, Călărași County, placed on the high terrace of Iezerul Mostiștea Lake, located at cca. 15 km distance from the Danube (I. Andrieșescu 1924). The researches were resumed in 2000 and they focused on both the tell-

settlement and its surroundings (R.-R. Andreescu, C. Lazăr 2008). In 2014, with the occasion of the researches for establishing the Eastern limits of the Eneolithic necropolis, several complexes from different periods were discovered. The most interesting is a burnt building belonging to Gumelnița culture (C1/2014), which seems to be oriented North-South – East-West. The building is located at cca. 70 m West from the tell-settlement and it has an uneven rectangular shape with the dimensions of cca. 12 x10 metres, based on the spread of the debris of the building (fig. 9). Two more similar structures were identified by magneto-metric prospections in the Eastern area of the terrace. One of these anomalies was verified by an archaeological sondage, where burnt debris of another building were identified (R.-R. Andreescu *et alii* 2017, p. 136–137).

Other magneto-metric investigations lead to the identification of burnt structures, similar to those discovered in 2014 and 2016. The anomalies were verified by sondages which revealed burnt layers of debris (C. Lazăr, R.-R. Andreescu 2018, p. 130). As a conclusion, the researches at Sultana proved the existence of burnt constructions located in the nearby of the tell-settlement, but the function and their relations with the tell-settlement will have to be clarified in the future campaigns.



Fig. 9. Sultana-Malu Roșu: C1/2014 Construction. View from the North (after R.-R. Andreescu *et alii* 2017, fig. 2).

Sultana-Malu Roșu: construcția C1/2014. Vedere dinspre nord (după R.-R. Andreescu *et alii* 2017, fig. 2).

Another example discussed here is from Southern Danube, more precisely the Eneolithic tell-settlement of Podgorica (cca. 4600–4400 cal BC), located in Tărgoviște region from North-Eastern Bulgaria. Geophysical researches revealed a series of habitation structures

and activities areas in the exterior of the tell-settlement, and also some clues regarding the management of the environment. As highlighted by the authors in the 90's of last century, the the modern topographic limits of a tell-settlement do not also represent the limits of activity around it (D.W. Bailey *et alii* 1998, p. 373).

Thus, nine structures with shapes and dimensions similar with Eneolithic buildings already known by excavation made in the region were identified by geophysical survey (D.W. Bailey *et alii* 1998, fig. 4). The sondages made for the verification of geophysical results revealed the existence of *in situ* burnt houses and concentrations of materials. Besides these habitation traces located nearby the tell-settlement, the geophysical survey also reveals the presence of some linear structures, interpreted as belonging to a hydrographic system management of the area in immediate proximity to the tell-settlement, which is supposed to go through repeated episodes of floods or drought (D.W. Bailey *et alii* 1998, p. 378-382).

The conclusion based on the researches made at Podgorica is that the limits of habitation vary in time, at least in this case seem to modify according with the hydrological regime of the area, therefore the expansion around the tell-settlement seemed to take place in dry climatic conditions (D.W. Bailey *et alii* 1998, p. 373).

There are more study cases from Southern Romania for which the possibility of existence of habitations exterior to tell-settlements was also discussed.

The tell-settlement from Vătași, Teleorman County (fig. 10) is located at the limit of the flood plain and the low left terrace of Dâmbovnic River. An exterior habitation was identified at 100 m North from the tell-settlement, contemporary with at least one of the Gumelnița habitations from the tell-settlement. The area is unfortunately disturbed by modern interventions. In its profile a thick layer of 70 cm was identified, comprising numerous anthropic components, including materials belonging to Gumelnița culture. In the East nearby of the tell-settlement, a series of magnetic anomalies indicate the presence of another exterior habitation, from a different moment of time than the tell-settlement. The ceramic fragments discovered in this area are atypical, but the fabric is similar to the one belonging to Gumelnița culture (C. Bem *et alii* 2013, p. 96).

*

After introducing all these examples, we highlight once again that the subject of this paper is represented by the nature and relation of habitations located in the nearby of tell-settlements, thus being considered as a continuation of the activities which took place inside the tell-settlement.

But the situation of habitations located around a tell-settlement is far more complex that previously thought.

Thus, in the area where the tell-settlement is located, there are other habitations, some of them large (flat settlements), but they are placed at distances from some hundreds of meters to some kilometres away. One such example is the site of Vitănești presented above.



Fig. 10. Vătași: Aerial view of the area; the oval contours indicate the exterior habitations location (after C. Bem *et alii* 2013, fig. 4, photo Carmen Bem).

Vătași: Fotografie aeriană a zonei; contururile ovale indică amplasamentul locuirilor exterioare (după C. Bem *et alii* 2013, fig. 4, foto Carmen Bem).

A special study-case is the micro-zone Buçșani, Giurgiu County, where many tell-settlements and other habitations located on the terraces of Neajlov River, belonging to Gumelnița culture, were investigated so far (C. Bem 2017, p. 79).

A complex situation is found at Căscioarele, Călărași County, a tell-settlement located on an island (Ostrovelul) of Cătălui Lake, surrounded by other habitations placed on the terraces around the tell-settlement (G. Cantacuzino, G. Trohani 1976, p. 261–262).

A special case is the existence of a small mound near the tell-settlement, which was interpreted as a small-size tell-settlement. It is the case of the sites at Tangâru (C. Bem *et alii* 2012, p. 26), Bordușani (D.N. Popovici *et alii* 2005, p. 69–70) and Mariuța (V. Parnic *et alii* 2005, p. 236). Unfortunately, none of these features have been yet excavated, so no speculations could be made so far regarding the function and their relation with the tell-settlement.

◆ Discussions

The data provided by archaeological researches offer complex information regarding the organization and management of inhabited space by the Eneolithic communities at the Lower Danube.

Even though the area outside the tell-settlements was less researched, the habitation around tell-settlements was known in Southern Romania from the 60's - 70's of last century by the archaeological materials discovered on the terrace near Teiu tell-settlement and on the basis of the results of archaeological excavations around the tell-settlement from Radovanu.

The above mentioned examples generated a series of observations which are the basis for discussions regarding the nature and function of these habitations and their relations with the tell-settlement.

The researches from Podgorica raised interesting questions regarding the habitation dynamic. Unfortunately the field work was limited, so some of the problems remained unsolved. The small size sondages undertaken here revealed the presence of habitation around the tell-settlement but this episode could not be correlated with one of the habitation layers from the tell-settlement due to insufficient researches.

The situation is more complex at Pietrele, where the researches brought very interesting information regarding the habitation around the tell-settlement. In our opinion there are still some clarifications to be made regarding the dimensions of the settlement and the chronological relation between the habitation on the tell-settlement and those from nearby. Thus, in the interpretation of the authors of the researches at Pietrele, the plan of the settlement consists of 110 burnt buildings, based on the geophysics prospectations. This evaluation is considered plausible by taking in consideration the complexity of the ceramic, metal and bone production at Pietrele. The issue of the Pietrele settlement dimensions is however differentiated, the authors of researches considering that '*The settlement was only for a while considerably larger than the habitation on the tell-settlement*' (translated in English, after M. Toderaş *et alii* 2009, p. 42). Archaeological researches on a larger scale would bring precious information about the nature and function of the habitation around the tell-settlement. They could clarify the issue of chronological relation between the constructions on the tell-settlement and those around it.

In this context, the next question is which was the nature of those habitations around the tell-settlement and which was the relation between these and the *tell*-itself?

Researchers elaborated different hypotheses over time.

So, the tell-settlement was seen, for example, by Douglass Bailey as a centre for agricultural works and specialized components in the frame of trans-regional networks of agricultural production and exchanges, managed by some elites (D.W. Bailey 1999, p. 95). Other interpretations see the tell-settlement as a 'residence' of the local community from a certain area, where its members gathered for ceremonies, as it was the case for Teiu (I. Nania 1967, p. 21) or an exclusivist area where the houses of dominant families or buildings with public utility were located, as it was the case for Pietrele (M. Toderaş *et alii* 2009, p. 42).

By contrast with the habitation around it, the tell-settlement was seen as a refuge place, as it was the case for Teiu, taking in consideration that the habitation also used other spaces exterior to the tell-settlement (S. Morintz 1962, p. 282). In the same way is interpreted the habitation on the high plateau from Radovanu, situated on a place more easily to defend, a real "*acropolis*" surrounded by ditches, where all the members of the community could withdraw (E. Comşa 1990, p. 113).

The habitation around tell-settlements was also related with the environment changes, especially the alluvial activity. Thus, at Podgorica, the use of the land around the tell-settlement was related with the evolution of the hydrographic regime, which passed through repeated episodes of activity represented by either floods or drought (D.W. Bailey *et alii* 1998, p. 385). Also, as it was the case at Teiu, S. Morintz related the existence of the settlement on the terrace with the floods of Mozacu River which endangered the habitation on the tell-settlement and therefore determined the community to move on the nearby terrace (S. Morintz 1962, p. 278-280).

At Vităneşti the extension of the settlement in the exterior area was initially seen as a consequence of a possible demographic growth (R.-R. Andreescu, P. Mirea 2008, p. 31-32).

A possible area with economic activity is located at Radovanu, on the Western terrace nearby the tell-settlement, interpreted by the author of excavations as a 'workroom' area (E. Comşa 1990, p. 70).

The examples presented above demonstrates that the habitation in the Eneolithic period was complex, around tell-settlements existing areas which attest different human activities.

But what was the nature of these habitations around tell-settlements? Unfortunately the insufficient archaeological researches can not give an appropriate answer about the dimensions, duration and function of these habitations. Without the intensive research of habitations around tell-settlements, only speculations can be made so far. For example, at Radovanu a "workroom" area was mentioned, but this is only illustrated by a building with loom weights⁴. Besides these loom weights are common finds for many dwellings, including these located on the tell-settlements.

At Pietrele the geophysics surveys indicated many structures and the researches revealed the existence of habitations which spread over a long period of time, cca. 750 years (S. Hansen, M. Toderaş 2012, p. 129). An interesting case is surface J where two buildings were discovered overlapped almost on the same emplacement, with an oven, a clay installation and a rich ceramic inventory - pythoi, anthropomorphic vessel (S. Hansen, M. Toderaş 2012, p. 130–136). On the basis of the analysis of the ceramic inventory (closed shapes, large storage capacity), their use is considered rather for storage than for consumption (A. Reingrüber 2012, p. 147).

For the habitations at Teiu there is not detailed information regarding the inventory of the buildings discovered there. At Vităneşti, the very poor inventory comprises materials which are commonly found in every tell-settlement: very fragmented ceramics, flint and bone tools. The burnt building material, poor as well, suggested a habitation / short time habitation, possibly related with some economic activities.

The spread of these habitations is another important issue, closely related with the socio-economic aspect of a certain settlement. Thus, the presence of many buildings around the tell-settlement suggests the existence of a settlement with a certain type of organization, in which the tell-settlement could represent the premises of some leaders.

The existence of constructions around the tell-settlement could also suggest houses appeared temporarily due to demographic expansion.

Also, the hypothesis according to which there were some constructions where different activities were taken place outside the tell-settlement (workrooms, cereals processing, shelters for domestic animals), should not be excluded. The space within the tell-settlement was quite limited, so it is normal that a series of activities to be happening around it.

It's not necessary for the existence of a unique pattern for all these habitations. Some of the areas could have been effectively inhabited, as it is the case for Pietrele or Teiu, where many constructions are documented. Others, like Vităneşti, where at least until now the traces

⁴Still, clear economic activities are attested in other tell-settlements, for example at Provadia-Solnitsata (Bulgaria), located at cca. 40 km distance from the Black Sea. In the earlier stages of development (cca. 5400-5200 cal BC) salt production was carried out by boiling brine from the springs in solid dome ovens located in buildings within the settlement. Later, in the period between 4650-4500 cal BC (Varna culture), a large salt production complex emerged near the settlement, with more productive larger open installations, especially designated for this activity. This new technology is considered to have reached an "industrial" level for that time (V. Nikolov 2010, p. 492-497).

are poor, would suggest different activities, not well documented by the few archaeological materials discovered so far. At Sultana there is a very interesting pattern, a mixture of the inhabited and funerary spaces, but the chronological relations between them are not very clear at the moment. At Teiu, the 35 houses (10 on the tell-settlements and 15-20 on the terrace) were not necessarily contemporaneous, the habitations discovered here belonging to both A2 and B1 phases of Gumelnița culture. At Pietrele, the Neo-eneolithic habitation in the tell-settlement area covers a large period of time, including Boian and Gumelnița cultures, so the problem of contemporaneity of the 80 structures found outside the tell-settlement with those on the *tell* remains to be verified.

◆ Conclusions

The Eneolithic landscape at the Lower Danube is complex, with tell-settlements that dominate the territory, surrounded by habitations more or less spread, with a life duration generally limited related to the tell-settlement. The researches are just at the beginning and more investigations are necessary in order to establish a clear relation between the habitation type, from the tell-settlement and around it.

Another research direction focus on contemporary habitations located at certain distances from the tell-settlement, as it is the case for Vitănești III and Vitănești IV sites.

Future researches should take in consideration excavations on larger scale. In this way, the chronological relation between the tell-settlement and the habitations around it could be better known, as well as the real dimensions of the last ones. Once the two axes defined, in time and space, we can also pass to the next research step, more precisely the analysis of activities that were taken place in the two habitations areas and the relation between them.

Even though the old researches did not have the extent of the recent ones or did not benefit of all modern methods of investigation, researchers like S. Morintz or E. Comșa showed ever since the 60's – 70's of last century that the inhabited space was not limited to the tell-settlement itself, the human communities occupying in some moments others spaces in the nearby of the tell-settlements.

◆ Bibliography

- | | |
|--------------------------------------|---|
| R.-R. Andreescu,
D.W. Bailey 2002 | Măgura-Lăceni-Vitănești (com Măgura, com. Orbeasca, sat Lăceni, com. Purani, sat Vitănești), jud. Teleorman. Punctele: Lăceni - „Valea Cioroaița”, Măgura (Cla 2), Măgura-Bran (Cla001), Măgura-Buduiasca (Teleor 003), Vitănești (Teleor 007), <i>Cronica. Campania 2001</i> , CIMEC, București, p. 195-199. |
| R. Andreescu,
C. Lazăr 2008 | Valea Mostiștei. Așezarea gumelnițeană de la Sultana Malu Roșu, <i>CA</i> , 14-15, p. 55-76. |
| R.-R. Andreescu,
P. Mirea 2008 | Tell settlements: a pattern of landscape occupation in the Lower Danube, in D. Bailey, A. Whittle, D. Hofmann (eds.), <i>Living Well Together?: Settlement and materiality of South-East and Central Europe</i> , Oxbow Books, p. 28-34. |

- R.-R. Andreescu, Lazăr C. 2017 Sultana, com. Mânăstirea, jud. Călărași, punct: Malu-Roșu. *Cronica. Campania 2016*, CIMEC, București, p. 136-137.
- R.-R. Andreescu et alii 2000 R.-R. Andreescu, P. Mirea, P. Zaharia, 2000, Vitănești, com. Purani, jud. Teleorman. Punct: Măgurice, *Cronica. Campania 1999*, CIMEC, București, p. 113.
- R.-R. Andreescu et alii 2003 R.-R. Andreescu, P. Mirea, Ș. Apope, Cultura Gumelnița în vestul Munteniei. Așezarea de la Vitănești, jud. Teleorman, CA, 12, p. 71-87.
- R.-R. Andreescu et alii 2013 R.-R. Andreescu, K. Moldoveanu, M. Pavel, I. Torcică, Vitănești, com Vitănești, jud. Teleorman, punct: Măgurice, *Cronica. Campania 2012*, CIMEC, București, p. 137-138.
- I. Andrieșescu 1924 Les fouilles de Sultana, *Dacia*, 1, p. 51-107.
- D.W. Bailey et alii 1998 D.W. Bailey, R. Tringham, J. Bass, M. Stevanović, M. Hamilton, H. Neumann, A. Raduncheva, Expanding the dimensions of early agricultural tells: the Podgoritsa Archaeological Project, Bulgaria. *Journal of Field Archaeology*, 25(4), p. 373-396.
- D.W. Bailey 1999 What is a tell? Spatial, temporal and social parameters, in J. Brück, M. Goodman (eds.), *Making Places in the Prehistoric World*, UCL Press, London: p. 94-111.
- C. Bem 2017 Despre Microzona Bucșani și ansamblul de situri Bucșani Pădure (precizări necesare), *SP*, 14, p. 79-91.
- C. Bem et alii 2012 C. Bem, A. Asăndulesei, C. Haită, Carmen Bem, F.-A. Tencariu, V. Cotiugă, Ș. Caliniuc, Identity in diversity: photogrammetry, 3d laser scanning and magnetometric analysis of Gumelnița tells from Muntenia (Romania), in V. Cotiugă, Ș. Caliniuc (eds.), *Interdisciplinarity Research in Archaeology. Proceedings of the First Arheoinvest Congress, 10-11 June 2011, Iași, Romania*, Archaeopress, Oxford, p. 19-36.
- C. Bem et alii 2013 C. Bem, A. Asăndulesei, C. Haită, Bem Carmen, M.Ș. Florea, Interdisciplinary investigations. The tell settlement from Vătași Măgura (Teleorman County, Romania), *SP*, 10, p. 89-117.
- G. Cantacuzino, G. Trohani 1976 Săpăturile arheologice de la Cătălui-Căscioarele, jud. Ilfov. CA, 3, p. 261-328.
- Comșa E. 1990 *Complexul neolitic de la Radovanu*, CCDJ, 8, Călărași.
- R.G. Dimitriu et alii 2002 R.G. Dimitriu, R.-R. Andreescu, G. Manea. 2002, Magnetic investigation of several prehistoric sites in Romania, Book of abstracts, *3rd Balkan Geophysical Congress and Exhibition, 24-28 June, 2002, Sofia, Bulgaria*, p. 365-366.

- S. Hansen,
M. Toderăș 2012
- The Copper Age Settlement Pietrele on the Lower Danube River (Romania), in R.Hofmann, F.-K. Moetz, J. Müller (eds.), *Tells: social and environmental space*, Proceedings of the International Workshop "Socio-Environmental Dynamics over the Last 12,000 Years: The Creation of Landscapes II (14th –18th March 2011)", Kiel, Volume 3, Verlag Dr. Rudolf Habelt GmbH, Bonn, p. 127-138.
- C. Lazăr,
R.-R. Andreescu 2018
- Sultana, com. Mânăstirea, jud. Călărași, punct: Malu-Roșu. *Cronica. Campania 2017*, CIMEC, București, p. 129-131.
- P. Mirea,
I. Torcică 2015
- Studiu arheologic, istoric și etnografic aferent P.U.G-ului comunei Vitănești, jud. Teleorman*, Muzeul Județean Teleorman, Alexandria.
- S. Morintz 1962
- Tipuri de așezări și sisteme de fortificație și împrejmuire în cultura Gumelnița. *SCIV*, 13 (2), p. 273-284.
- I. Nania 1967
- Locuitorii gumelnițeni în lumina cercetărilor de la Teiu, *SAI*, IX, p. 7-23.
- V. Nikolov 2010
- Salt and gold: Provadia-Solnitsata and the Varna Chalcolithic cemetery, *Archäologisches Korrespondenzblatt*, 40(4), p. 487-501.
- V. Parnic *et alii* 2005
- V. Parnic, A. Păun, A. Ilie, M. Ungureanu, Măriuța, com. Belciugatele, jud. Călărași, Punct: La Movilă. *Cronica. Campania 2004*, CIMEC, București, p. 236-237.
- D.N. Popovici
et alii 2005
- D.N. Popovici, F. Vlad, A. Nălbitoru, M. Mărgărit, Bordușani, com. Bordușani, jud. Ialomița, punct: Popină. *Cronica. Campania 2004*, CIMEC, București, p. 69-73.
- A. Reingrüber 2012
- Copper-age house inventories from Pietrele: preliminary results from pottery analysis, in R. Hofmann, F.-K. Moetz, J. Müller (eds.), *Tells: social and environmental space*, Proceedings of the International Workshop "Socio-Environmental Dynamics over the Last 12,000 Years: The Creation of Landscapes II (14th –18th March 2011)" in Kiel, Volume 3, Verlag Dr. Rudolf Habelt GmbH, Bonn, p. 139-151.
- E. Rosenstock 2005
- Höyük, Toumba and Mogila: a settlement form in Anatolia and the Balkans and its ecological determination 6500–5500 BC, in C. Lichter (ed.), *How did farming reach Europe*, BYZAS, 2, p. 221-237.
- M. Toderăș *et alii* 2009
- M. Toderăș, S. Hansen, A. Reingruber, J. Wunderlich, Pietrele-Măgura Gorgana: o așezare eneolitică la Dunărea de Jos între 4500 și 4250 î.e.n., *MCA (SN)*, 5, p. 39–90.