

## Archaeological research in Miercurea Sibiului – Petriș (Sibiu County, Romania): the Starčevo-Criș level during 1997–2005 (a preliminary report)

Sabin Adrian Luca<sup>1</sup>, Dragoș Diaconescu<sup>2</sup> and Cosmin Ioan Suciuc<sup>3</sup>

<sup>1</sup> Lucian Blaga University Sibiu and National Brukenthal Museum Romania, sabin.luca@brukenthalmuseum.ro

<sup>2</sup> National Brukenthal Museum Sibiu Romania, goshu\_d@yahoo.com

<sup>3</sup> Lucian Blaga University Sibiu Romania, cosmin.suciuc@ulbsibiu.ro

**ABSTRACT** – *The article presents an archaeological description of the Starčevo-Criș close complexes at Miercurea Sibiului-Petriș, one of the Earliest Neolithic settlements in Romania. The site belongs to the early wave of First Temperate Neolithic communities who reached Romania. Each complex is presented through plans, statistical ceramic analyses and some representative materials. White painting is present here in the earlier complexes.*

**IZVLEČEK** – *Članek predstavlja arheološko obravnavo zaprtih kompleksov kulture Starčevo-Criș na najdišču Miercurea Sibiului-Petriș, enem najzgodnejših neolitskih najdišč v Romuniji. Najdišče pripada prvemu valu skupin 'prvega neolitika zmernega pasu' (First Temperate Neolithic), ki so dosegle Romunijo. Vsak kompleks je predstavljen na načrtih, skozi tipološko analizo lončenine in nekaterimi reprezentativnimi najdbami. V zgodnejših kompleksih se pojavlja tudi belo slikanje.*

**KEY WORDS** – *Early Neolithic; Starčevo-Criș; white painting; radiocarbon; statistical analyses*

### General context

The Petriș archaeological site is situated 500m east of the Miercurea Băi halt, 50–80m north of the Sebeș Alba–Sibiu highway, along the Secaș river terrace which is 4–5m in height (Plan 1). The archaeological discoveries are over an area of about 300/100m.

Systematic research at the site commenced in 1997, and at the moment the excavators comprise researchers and representatives of several institutions in Romania and abroad<sup>1</sup>.

The interdisciplinary profile of the accomplished research (the statistics on ceramics; the analysis of soil

types as rough materials in ceramics processing; the pre-elevation of samples and the <sup>14</sup>C data; the designated analysis of items of flaked obsidian and flint; the zoo-archaeological analysis of the remnants; the analysis of the route attained by the adornments, tools and weapons made of bone, horn and shell; the analysis of seed remnants, etc.), as well as the particularities of the site's settlement, has led to outstanding findings and remarkable conclusions.

For a better understanding of the topographical setting, detailed measurements were taken (Plan 2), allowing correlation with advanced technology pro-

<sup>1</sup> Sabin Adrian LUCA – „Lucian Blaga” University of Sibiu and The Brukenthal National Museum of Sibiu, Romania; Dragoș DIACONESCU, Adrian GEORGESCU, Gheorghe NATEA, Florina Maria NIȚU, Anamaria ȘEULEAN – The Brukenthal National Museum of Sibiu, Romania; Cosmin Ioan SUCIUC, Florian DUMITRESCU CHIOAR – „Lucian Blaga” University of Sibiu, Romania; Paolo BIAGI – Ca'Foscari University of Venice, Italy; Michela SPATARO – British Museum, London, U.K.; Georgeta EL SUSI – Institute of Archaeology of the Romanian Academy, Bucharest, Romania; Corneliu BELDIMAN – „Dimitrie Cantemir” University of Bucharest, Romania; Diana SZTANCS – teacher; Marius CIUȚĂ – Romanian Police, Alba Iulia; Beatrice CIUȚĂ – „1 Decembrie 1918” University of Alba Iulia, Romania.

grammes such as Google Earth. The area in which the site is located enjoys high quality satellite imagery provided through this particular programme. In the near future, we will be able to publish the results of the topographic data processing, *i.e.* geographical simulations and mathematical processing of data. In order for this to happen, a geo-magnetic study of the area is still needed; the site's stratigraphy promises a particularly relevant geo-magnetic map.



**Plan 1. The Miercurea Sibului city map with the archaeological site at Petriş.**

In the first stage, research at the site was conducted by means of stratigraphic control trenches, for which purpose the eastern zone was chosen (Plan 2); Plan 3 clearly presents the exact positioning (S<sub>1</sub>/1997 - 20/1.5m; S<sub>2</sub>/1998 - 16/2m; S<sub>3</sub>/1998 - 16/2 m; S<sub>4</sub>/1999 - 16/2m and S<sub>5</sub>/2000 - 20/1.5 m).

In the next stage (begun in 2001) the digging system was changed on the researched surfaces because it was observed that the stratigraphy is extensive and horizontal, in which circumstances the archaeological complexes rarely intersect and the dwellings, pits and other constructions could be excavated very productively. That is why it was decided to set aside the archaeological material coming from the cultural level, and concentrate efforts on as closely as possible on the architectural remnants, artefacts and biological remnants in the enclosed archaeological complexes. The surfaces studied (Plan s2 and 3) have the following measurements and numbers: SI/2001-2003 - 20/20m; SII/2004-2005 - 15/16m; SIII/ 2006-2007 - 20/10m; SIV/2006 - 40/40m (no image; it is to be traced out north of the SI-II surfaces; still to be excavated); SV/2007 (still to be excavated).

The present article is concerned with the analysis of the Starčevo-Criş levels, systematically researched from 1997-2005 in S<sub>1-5</sub>/1997-2000 sections, and SI-II/2001-2005 surfaces. In brief, the stratigraphy of the site is as follows:

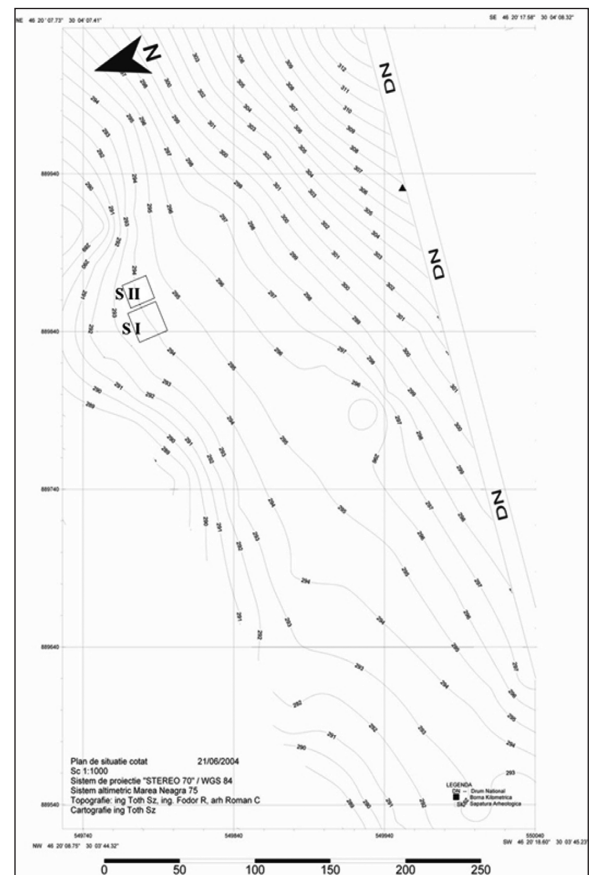
- I** - the first and the oldest dwelling level appertains to the Starčevo-Criş culture, presenting several sub-levels:
- Ia** - the deepened dwellings of this sub-level appertain to the Starčevo-Criş IB phase;
- Ib** - the deepened dwellings of this sub-level appertain to the Starčevo-Criş IC-IIA phase;

**Ic** - after a *hiatus* (?), the deepened dwellings of this sub-level appertain to the Starčevo-Criş IIB-III A phase.

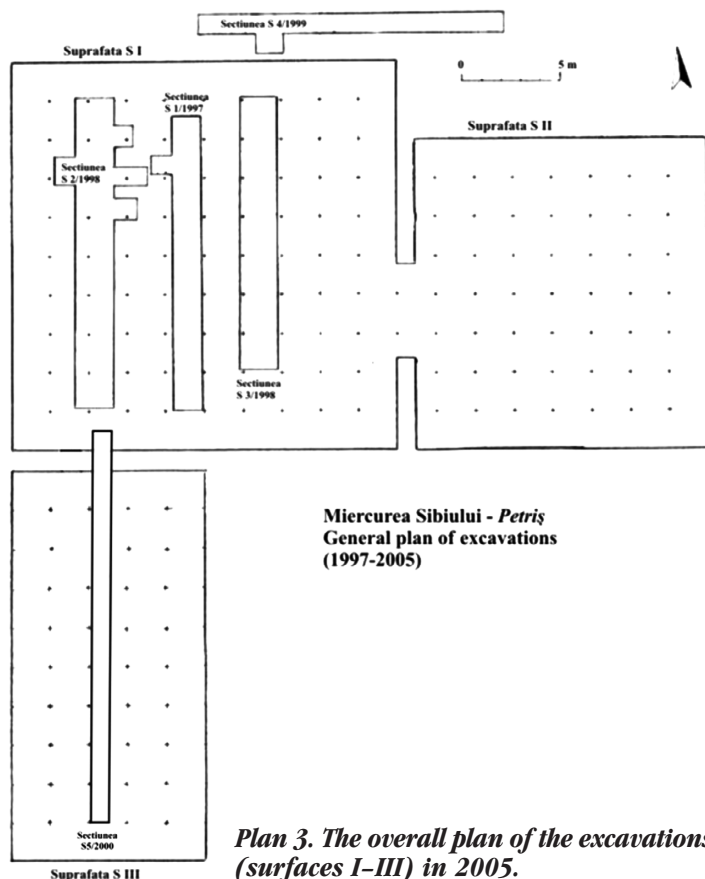
**II** - the second level appertains to the Vinča culture, old phase (A, and evolving to B1):

**IIa** - the dwellings of these sub-levels - dwelling pits - are constructed in two stages:

**IIa<sub>1</sub>** - the dwellings of this stage appertain to the Vinča A<sub>2-3</sub> phase (typologically and stylistically);



**Plan 2. Topographical plan of the terrace and location of surfaces I and II.**



**Plan 3. The overall plan of the excavations (surfaces I–III) in 2005.**

**IIa<sub>2</sub>** – the dwellings of this stage appertain to the Vinča A<sub>3</sub> phase.

**IIb** – the surfaced dwellings of this sub-level appertain to the Vinča A<sub>3</sub>–B<sub>1</sub> phase.

**II/III level** – unpublished research in 2007, led to the discovery of several pits containing archaeological material from the Vinča B<sub>1</sub> phase, yielding painted decorations specific to the Lumea Nouă Transylvanian culture; future research will reveal more details of this aspect. Considering the fact that the stratigraphy of the site was already published, we chose to name this level: II/III, which anyway emerged after Vinča B<sub>1</sub> and before Vinča C<sub>2</sub>.

**III** – this level appertains to the Petrești culture; its surfaced dwellings, with massive clay floors, appertain to the AB phase of the culture.

**IV** – the pits at this level were dug by Celto-Dacians in II–I BC.

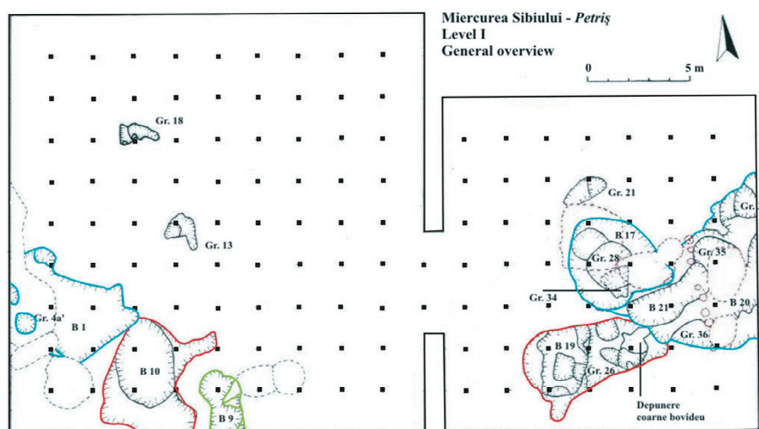
**V** – the graves and some of the heterogeneous archaeological complexes at this level appertain to the Gepid period.

**VI** – this level is represented by a semi-deepened dwelling, with a stone oven that could be dated to the first millennium A.C.

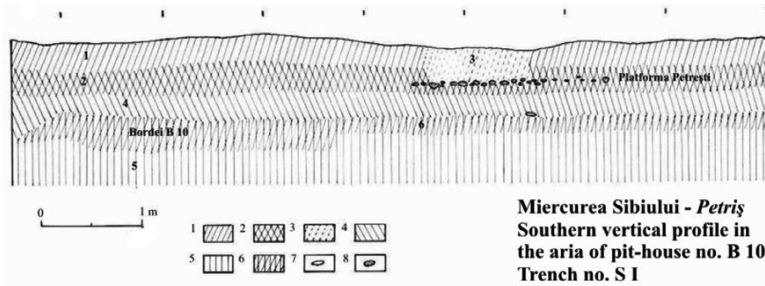
The present article analyses the architectural remnants of the oldest first level in Miercurea Sibiului-Petriș, researched between 1997 and 2005. All the dwellings at this level were sunk deep into the ground (Plan 4), the analysis being done in the order of their age. The criteria were a result of a study of the direct stratigraphic relations, architecture, typological and stylistic examinations, studies in mathematics and statistics, and absolute radiocarbon chronology.

The architecture of the complexes was severely damaged – in the upper part of the dwelling pit – the resultant dyke (levee) is earthen, formed by earth and other elements dug out, on the pit's margins, during contemporary agricultural activities and construction enterprises of the inhabitants who have subsequently followed the Starčevo-Criș culture. This is why we deal mainly with the lower part of the construction, meaning 50–60 % of it.

The later work determined, in most cases, the destruction of the first (I) Starčevo-Criș layer. In its preserved parts (Plan 5 – level number 6) it is no thicker than 0.10m; it is discontinuous and presents a yellow-reddish colour, a clay-like consistency mixed with gravel, lying on gravel containing sand and loess. The reddish shade of the archaeological layer could indicate the formation of forest soils during the post-Ice Age period. Over the whole region of Transylvania, the first farmers settled on this type of soil which, after the sedimentation of vegetal remains resulting from human activities over many generations, evolved into the humus visible in the area of the site.



**Plan 4. Starčevo-Criș complexes in 2005 (level Ia–c).**



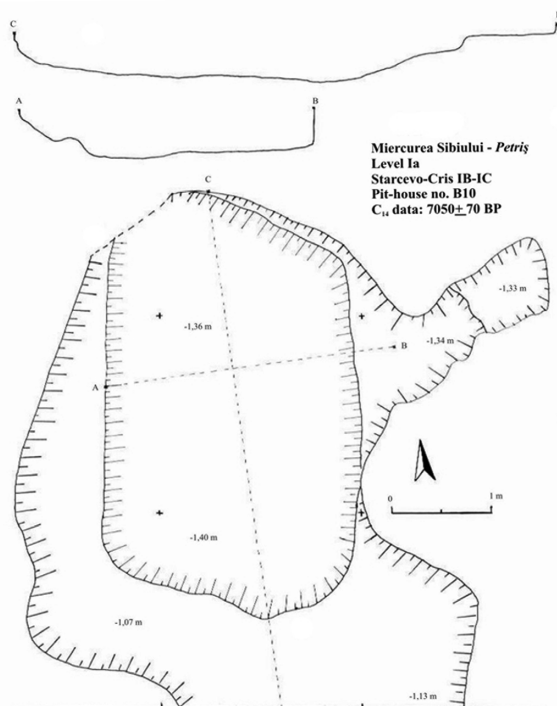
**Plan 5. Miercurea Sibiului-Petriş. Vertical stratigraphic profile in the zone of the B<sub>10</sub> dwelling pit.**

As could be observed, the vertical stratigraphy of the site is not very well developed (1-1, 20m), this being one of the features of most Transylvanian archaeological sites.

**The Ia sub-level**

**Dwelling-pit B<sub>10</sub>/2003 – Starčevo-Criş Culture (Plan 4, surface I, lower-centre; Plan 5, Plan 6; Fig. 1; Photo 1; Tab. 1)**

From a chronological and cultural perspective, the oldest dwelling-pit was discovered in Miercurea Sibiului-Petriş, gate number 10. It is rectangular and oriented approximately north-south. Part of the entrance on its eastern side has survived (Plan 6). The general features of the digging method in prehistory reveals it as a semi-dwelling-pit, the area designed for air circulation being deepened approximately 0.40m in comparison with the lateral part designed as a



**Plan 6. Miercurea Sibiului-Petriş. Horizontal plan of the B<sub>10</sub> dwelling pit.**

sleeping area (Plan 5). There is no heating system. Also, there are no elements of a dyke (levee) formed by the earth that was dug out, or pole-pits to indicate its architecture. The pit's filling shows that the dwelling was left on purpose and rapidly filled in with the remains of other constructions. The <sup>14</sup>C data indicate that the dwelling was in use before 7050 ± 70 calBP (Tab. 2 (see Appendix), Fig. 9).

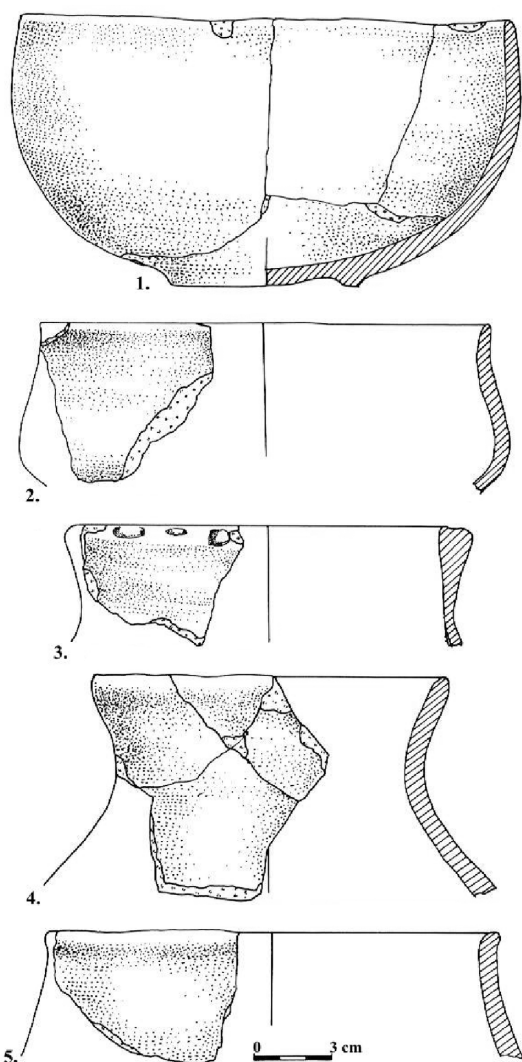
The artefacts and biological finds do not indicate disturbances other than those caused by human activity.

Some 382 ceramic fragments comprise the B<sub>10</sub> complex (Fig. 1, Photo 1, Graphic 1, Tab. 1). Fine ceramics predominate with 47%, closely followed by semi-fine ceramics (41%) and only 17% coarse ceramics. The colour of the exteriors are mainly shades of red: russet (27%) and cardinal red (7%). Brick represents a 19%, followed by shades of brown: dark brown (12%) and light brown (5%). Grey (11%) and yellowish (5%) also occur. The temper consists of sand and husk (86%) or just sand (8%). The exterior surface is polished (49%) and smoothed (48%). 97% of the fragments do not present ornaments. All the above data make the B<sub>10</sub> dwelling pit at Miercurea Sibiului-Petriş one of the oldest archaeological complexes of this type north of the Danube.

**The B<sub>19</sub> dwelling-pit (Plan 4, surface II, lower left; Plan 7; Fig. 2)**

This item is closely connected – chronologically and culturally – to the G<sub>26</sub> pit (Plan 4, surface II, next to the B<sub>19</sub> to the right; Plan 7 – right). The features of G<sub>26</sub> will be described and discussed on another occasion. At this point we restrict ourselves to affirming that it indicates a ritual character (related to hunting and success in hunting rituals and practices; the pit contains dozens of pairs of *Bos primigenius* horns deposited, it seems, at the conclusion of a successful hunt; on this occasion, it is possible that a Neolithic community had been established). The <sup>14</sup>C data show that the pit was in use around 7010 ± 40 calBP (Tab. 2, Fig. 9).

The B<sub>19</sub> dwelling pit is rectangular and is oriented approximately north-south, as B<sub>10</sub> is. To the south, the entrance is partially preserved (Plan 7). The general features of the digging method used reveals it as a semi-dwelling-pit, the part designed for air circulation being deepened approximately 0.40m in comparison with the lateral parts designed as sleep-



**Fig. 1. Miercurea Sibiului-Petriș. Sherds from the B<sub>10</sub> dwelling pit.**

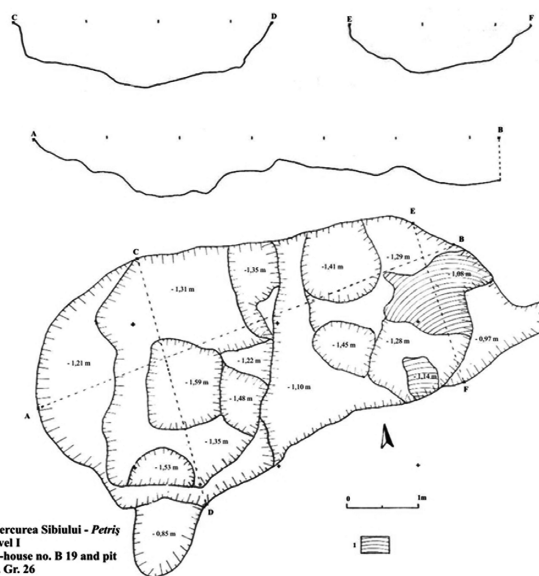
ping area. There is no heating system. Also, there are no elements of a dyke (levee) formed by the earth that was dug out, or pole-pits to indicate its architecture. The pit's contents show that the dwelling was left on purpose and rapidly filled with the remains of other constructions. The artefacts and biological finds do not suggest disturbances other than those resulting from human activity. Stratigraphic observations show that the B<sub>19</sub> dwelling pit was made after the digging of G<sub>26</sub>.

720 ceramic fragments, comprising the B<sub>19</sub> content, have been analysed (Fig. 2, Tab. 1, Graphic 1). The semi-fine ceramics predominate with 45%, followed by coarse ceramics (35%) and fine ceramics (20%). There are mainly shades of brown: brown (21%), dark brown (20%) and light brown (16%). There are presented also reddish brown (9%), russet (6%), greyish-black (5%), brown with flaps (4%), brick-colour (4%) and grey (4%). The other nuances are

less than 2% each. In the composition of the paste husk prevails in several combinations: husk and sand (38%), sand and husk (23%), sand, shivers and husk (11%), husk and shivers (8%), husk (8%), sand, husk and small stones (4%). The smoothing of the exterior surface of the fragments is as follows: smooth (30%), detached slip (22%), rough (20%), polished slip (15%), polished (5%), well smoothed (4%), smoothed slip (3%) and applied barbotine (ledge) (1%). The presence of ornaments is only 6%.

In our opinion, at the present moment, the oldest Neolithic horizon is in Miercurea Sibiului-Petriș, indicated by the mark Ia and defined by the B<sub>10</sub>, B<sub>19</sub> dwelling pits and the G<sub>26</sub> pit (Figs. 1, 2, Tab. 2, Photos 1, 2). These dwellings are not very deep, rectangular, with rounded corners. The B<sub>10</sub> dwelling pit is partially cut in its north-western corner by the B<sub>1</sub> dwelling pit which appertains – as we shall see as follows – to a subsequent phase of the same culture. If we are to compare this type of dwelling with other types at contemporary sites, we notice that the profile is identical (regarding shape, depth, the fashion of digging) with the one of the oldest dwellings in Gura Baciului (*Lazarovici and Kalmar 1995.63*) (a comparison with Ocna Sibiului is not possible yet, due to the lack of complete publication of the plans describing the oldest dwellings).

The study of the ceramics in these complexes shows that we are facing some of the oldest dwellings appertaining to farmers domesticating plants and animals during the Neolithic in Romanian areas. Comparing the categories of the ceramics in the present



**Plan 7. Miercurea Sibiului-Petriș. The plan of the B<sub>19</sub> dwelling pit and of the G<sub>26</sub> pit.**

ted site with those in Gura Baciului (a comparison with Ocna Sibiului is impossible due to the lack of published statistical data) a great many similarities are ascertained. These dwelling complexes, completely dug, also have singular characteristics like the presence of ceramic fragments painted with small spots of white-yellowish colour on a red, polished, glass-like background (Figs. 1, 2). This feature, specific to a technology extent in the very old cultural horizon (Gura Baciului I - the dwelling complexes at the inferior part of the level), is also specific to the archaeological complexes studied in Miercurea Sibiului.

In this regard, the B<sub>10,19</sub> dwelling pits and the G<sub>26</sub> pit in Miercurea Sibiului-Petriş are to be considered as part of the first migration in the opinion of Gheorghe Lazarovici and Zoia Kalmar (*Lazarovici and Kalmar 1995.199-200*), and regarding Gura Baciului I, in Nicolae Vlăsă's opinion (*Vlăsă 1976.198-264*), or Precriş Ia in Iuliu Paul's opinion (*Paul 1995.30-31, Abb. 2, 5*), the cultural horizon of the archaeological complexes being Starčevo-Criş IB (*Lazarovici 1979.40-41*).

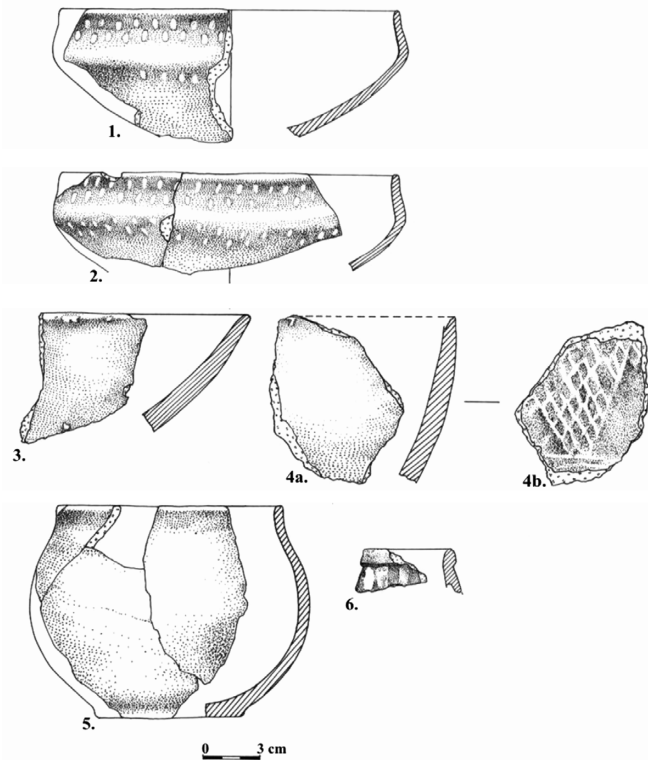
### The Ib sub-level

#### *The B<sub>17</sub> dwelling-pit (Plan 4, surface II, centre; Plan 8; Fig. 3, Tab. 1)*

This dwelling pit is round, being interrupted on its southern side by a complex of pits: B<sub>20-21</sub>; G<sub>31,35-36</sub>. To the south-east, the dwelling pit is disturbed by an oven-hearth at the Vinča level (a surfaced dwelling that appertain to the Vinča level is dated 6359 ± 130 BP). The pits anthropically upsetting the dwelling pit



**Photo 1. Miercurea Sibiului-Petriş. Painted sherd from the B<sub>10</sub> dwelling pit (no scale).**



**Fig. 2. Miercurea Sibiului-Petriş. Sherds from the B<sub>19</sub> dwelling pit and G<sub>26</sub> pit.**

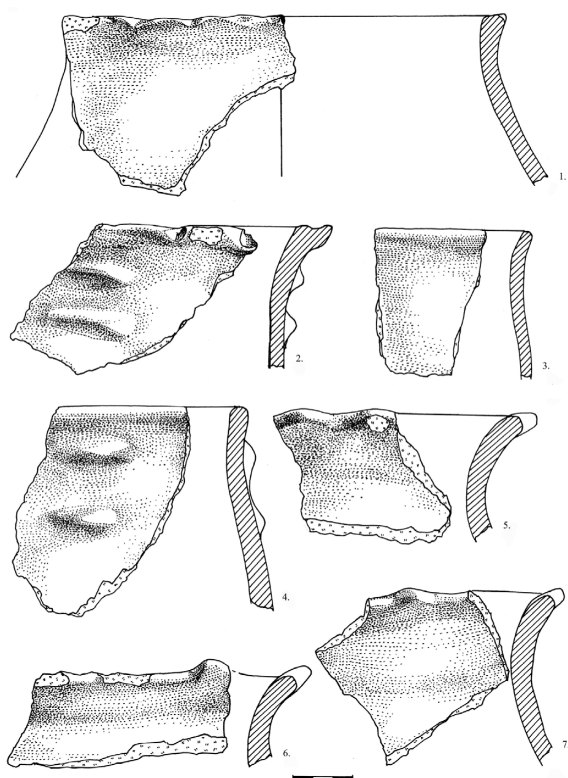
are G<sub>28</sub> and G<sub>34</sub> (Plan 8). The depth of the dwelling pit is greater than in the case of the dwelling pits of the Ia level by approximately 0,60m. The dwelling pit has lateral 'beds'.

649 ceramic fragments from the B<sub>17</sub>'s content have been analyzed (Fig. 3, Graphic 1, Tab. 1). Regarding the categories of ceramic, semi-fine ceramic (44%) predominate, followed by coarse (38%) and fine (18%) ceramic. As for colour, nuances of brown are most common: brown (28%), light brown (19%), dark brown (11%) and brown with flaps (7%). The reddish nuances are: reddish (11%), reddish-brown (11%) and cardinal red (3%). The temper used for the paste is mainly made up by different combinations of husk: husk and sand (64%), sand, husk and small stones (10%), sand and husk (8%) and husk (7%). Regarding the smoothing of the exterior surfaces, there are to be observed: smoothed slip (29%), detached slip (27%), rough (19%), smoothed (11%), smoothed slip (9%) and barbotine (3%). 89% of the fragments are not decorated, with barbotine (3%), application (3%), application and cell (3%) and finger tip impressions (1%). The pit is dated at 7030 ± 50 BP (Poz-24697 - Thanks to prof. dr. hab. Janusz Kozłowski who kindly accepted the sample in FEPRE project - Tab. 2, Fig. 9).

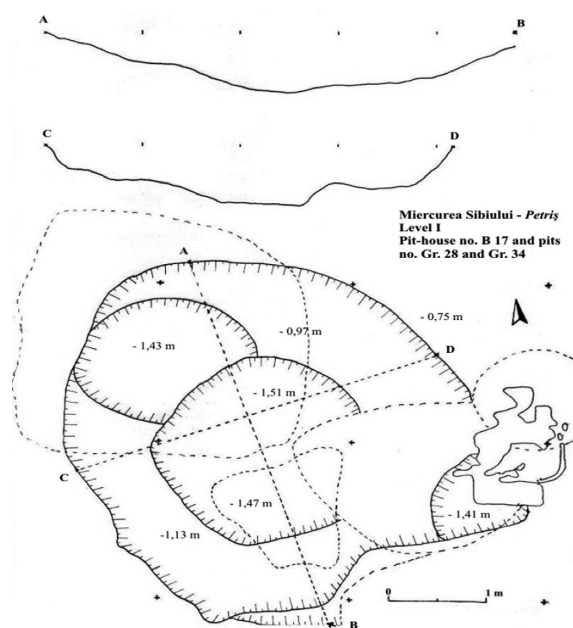
**The B<sub>20-21</sub> dwelling-pits and the G<sub>31,35-36</sub> pits (Plan 4, surface II, centre-right; Plan 9; Figs. 4 and 5)**

The B<sub>20-21</sub> dwelling pits and the G<sub>31,35-36</sub> pits are special cases in Miercurea Sibiului-Petriș. The five complexes are in a very small area. Because they intersect in such a manner, we faced difficulties in establishing their stratigraphic succession, considering their chronological succession at the same time. So, we resorted to intermediary stratigraphic profiles (cross-section) in order to establish the succession of these units. It was clear that, from a stratigraphic point of view, B<sub>21</sub> is the latest, as it ‘cuts up’ the filling of B<sub>20</sub> and G<sub>35</sub> which, in turn, intersects B<sub>20</sub>. The latter intersects the G<sub>36</sub> pit. The difficulty resided in establishing the stratigraphic position of G<sub>31</sub> in relation to the other four complexes, due to its eccentric position. The dwelling pits were abandoned and corked up at short notice, and a palisade at the Vinča level, as well as other two pits at the same level (indicated by the dotted line contours) ‘passed’ through the middle of the intersection of pits, making more difficult the chronology reading of the complexes.

129 ceramic fragments were recovered from B<sub>20</sub>. Semi-fine ceramics predominate (41%), followed by coarse ceramics (37%) and fine (22%). The nuances of brown are the most numerous: brown (24%), light



**Fig. 3. Miercurea Sibiului-Petriș. Sherds from the B<sub>17</sub> dwelling pit.**



**Plan 8. Miercurea Sibiului-Petriș. The plan of the B<sub>17</sub> dwelling pit.**

brown (19%), brown with flaps (8%). There are also nuances of red such as reddish-brown (6%), reddish (5%), cardinal red (3%), and nuances of grey: grey (10%), greyish-black (3%), light grey (3%) and grey with black flaps (1%). The temper used for the paste is mainly made up of different combinations of husk: husk and sand (70%), sand and husk (12%) and sand, husk and small stones (12%). The exterior surfaces are: detached slip (35%), polished slip (33%), rough aspect (17%), applied barbotine (5%) and smoothed slip (5%). Only 15% of the ceramic fragments are ornamented, with barbotine (5%) and application (2%) are predominant, and the rest of the decoration types being below 1%.

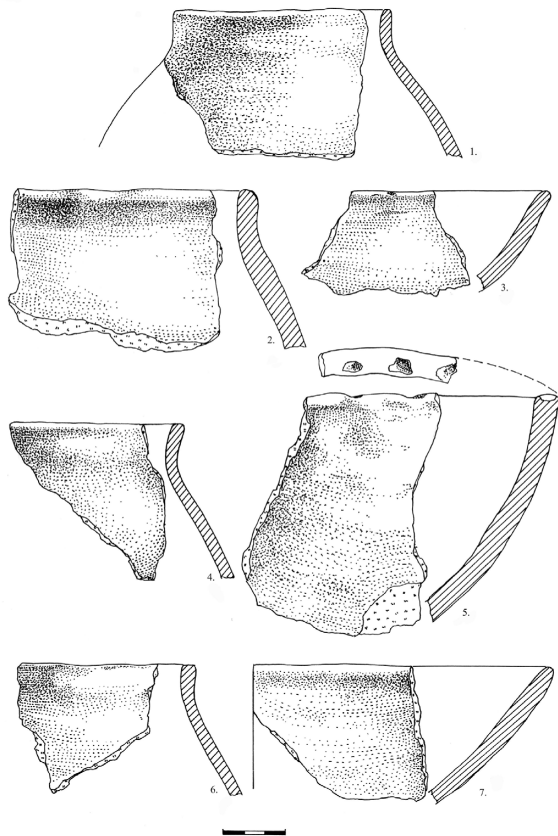
From B<sub>21</sub>, 186 ceramic fragments were analysed (Figs. 4 and 5), with semi-fine ceramic (51%) being the most frequent, followed by fine (25%) and coarse (24%). The exterior colour of the fragments is dominated by nuances of brown: brown (25%), light brown (21%), dark brown (20%) and brown with flaps (5%). The nuances of red are: reddish (5%), reddish brown (4%) and cardinal red (2%). Husk prevails in the composition of the paste: husk and sand (62%), sand and husk (17%) and sand, husk and small stones (9%). The exterior surfaces were: detached slip (40%), polished slip (22%), rough (13%) and smoothed (18%). Only 9% of the fragments are decorated, the percentage for every type of decoration being below 2%.

When analyzing the ceramics in these complexes (which offered enough data for a comparative ana-

lysis on typological and stylistic bases) we decided to integrate the complex of pits in the Ib sub-level (even if from a stratigraphic point of view there is a clear chronological difference between the five deepened complexes, the ceramic materials discovered here argue for the relative contemporaneity of these pits in the IC-IIA phase of the Starčevo-Criş cultural complex).

**The B<sub>1</sub> dwelling pit (Plan 4, surface I, left; Plan 10; Photo 3, Tab. 1)**

It seems that the initial pit of B<sub>1</sub> was round. Unfortunately, its initial shape was damaged by the B<sub>4</sub> Vinča dwelling pit (which reached the bottom of B<sub>1</sub> only here and there, but modified its initial shape) and the M<sub>3</sub> grave (level V - a Gepid necropolis). The <sup>14</sup>C data for this dwelling complex, 6920 ± 70 calBP, is the base - along with the typological and stylistic characteristics - for the absolute chronology of the Ib horizon here, representing the real time of the complex (the archaeological material discovered here is characteristic of fully functional house-ware). Two pits were preserved in the interior of B<sub>1</sub>, namely G<sub>4a</sub> and G<sub>4a'</sub> (Plan 4, surface I, left; Plan 10). It seems that they were part of this complex as pole-pits (?) of large dimensions. The archaeological ma-

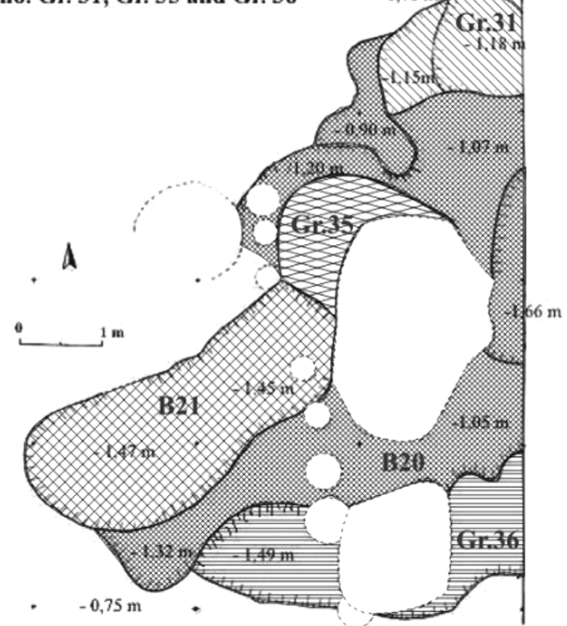


**Fig. 4. Miercurea Sibiului-Petriş. Sherds from the B<sub>21</sub> dwelling pit.**

**Miercurea Sibiului - Petriş**

**Level I**

**Pit-houses no. B 20, B 21 and pits no. Gr. 31, Gr. 35 and Gr. 36**



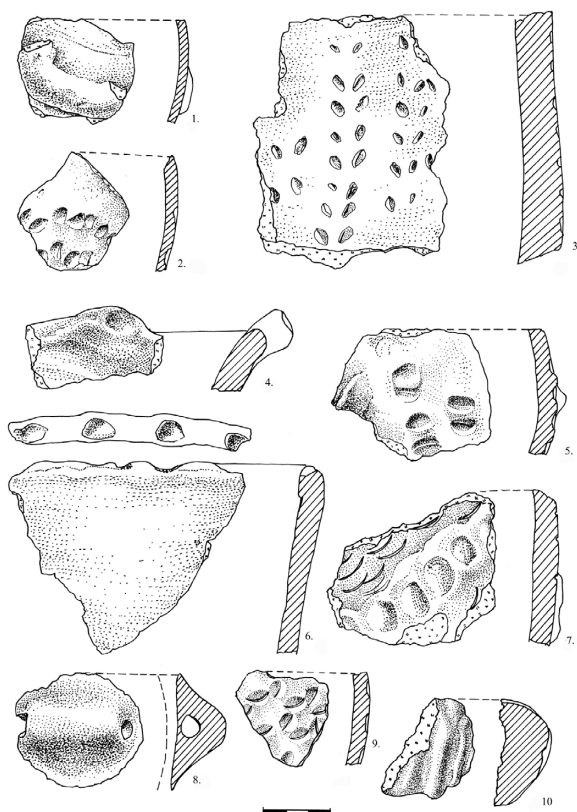
**Plan 9. Miercurea Sibiului-Petriş. The plan of the B<sub>20</sub> and B<sub>21</sub> dwelling pits.**

terials discovered in the two pits and in the dwelling pit prove that they are contemporaneous.

Only 141 ceramic fragments were recovered from B<sub>1</sub> (Fig. 6, Graphic 1, Tab.1). Fine ceramic predominates (41%), followed by semi-fine ceramic (37%) and coarse (22%). Brick colour (23%) is followed by the brown (18%), reddish (13%), cardinal red (11%), dark brown (9%), light brown (9%), grey (6%) and yellowish (2%). Husk prevails as a supplement in the composition of the paste: sand and husk (81%), husk and sand (13%) and fine sand (3%). The exterior surface is smoothed (56%) and polished (40%). Undecorated ceramics predominate (92%), most of the decorative elements being cells (5%). The rest of the ornaments are below 1%.

An item of special character was discovered in this dwelling pit. The schematic amulet (Fig. 6/4a-b; Photo 3) represents an 'idol bucranium' or a 'labret' (Karmanski 1986.12, *prilog 1*) and is made of clay. In Romania, this kind of amulet is to be found in settlements that appertain to the Starčevo-Criş cultural complex: Cluj-Napoca-Gura Baciului (Vlassa 1976. 211, 230, Fig. 14/3-4; Lazarovici and Kalmar 1995. 155, Fig. 22/6; Brukner 2000.298-299), Dubova-Cuina Turcului (Lazarovici 1979.34; Păunescu 1979. 37, fig. 14/ 11), Foeni-Sălaş (Ciubotaru 1998.75, Pl. III/6-7, 9), Miercurea Sibiului-Petriş (Luca 2002),





**Fig. 5.** Miercurea Sibiului-Petriș. Sherds from the B<sub>21</sub> dwelling pit.

Ocna Sibiului-Triguri (Paul 1995.51, Pl. VIII/5–6; XXX/3 a–b, 4 a–b) and Sălcuța (Lazarovici 1979.34, n. 170). Dumitru Berciu integrates very early the first level of the Piscul Cornișorului (Berciu 1961.29–30, 160, 161, 162, 167, 185–192), the same perspective being that in the case of the site at Timișoara-Fratelia (Drașovean 2001.34, Pl. 4/4–5), analogies in South-Eastern Europe being developed with Blagotin (Ciubotaru 1998.75). This author states that the items were discovered in the vicinity of a cultic complex and could have a utilitarian purpose, perhaps in connection with the religious practices, as they have been hypothesised at Divostin (Karmanski 1988.12), Dobanovici-Cigłana (Karmanski 1988.12), Donja Branjevina (Lazarovici 1979.34, n. 166; Karmanski 1989.Pl. 9/2–6, 10–12, 14; 2000, T. XXII; Brukner 2000.309), Grivac (Lazarovici 1979.34, n. 168), Knjepište (Brukner 2000.309), Kozluk (Srejšović 1969.306, Pl. 8; 85/2; Tasić 1973.90; Lazarovici 1979.34, n. 167), Lepenski Vir (Srejšović 1969.306, Pl. 8; 85/2; Tasić 1973.90; Lazarovici 1979.34, n. 167), Lug-Obrenovac (Jovanović 1967.20; Tasić 1973.90; Lazarovici 1979.34, n. 169) and Rakitovo (Matsanova 1996.105–127). Culturally, these items are to be integrated with the Starčevo-Criș culture, the IC–IIA phase (Lazarovici 1983.13; Ciubotaru 1998.75; Drașovean 2001).

### **The chronological and cultural integration of the Ib sub-level**

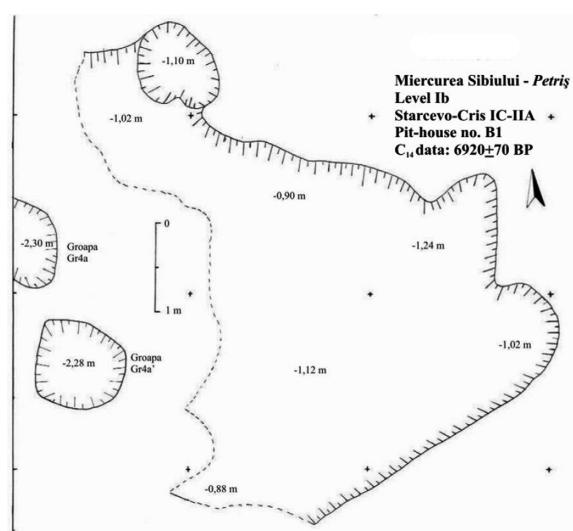
The B<sub>1</sub> dwelling pit is contemporary with Starčevo-Criș IC–IIA, according to the similarities regarding ceramic and plasters. In the same way, the <sup>14</sup>C data and the seriation with other data obtained from the same site clearly indicate a relation with the anterior sub-level and a certain evolution at the same time.

### **The Ic sub-level**

#### **The B<sub>9</sub> dwelling pit (Plan 4, surface I, lower centre; Plan 11; Fig. 8)**

This deepened dwelling shows – through the cropped archaeological material, as well as through architectural characteristics – that we are dealing with a different cultural and chronological horizon, a later one, appertaining to the Starčevo-Criș culture. The <sup>14</sup>C data for this archaeological complex – 6180 ± 40 BP – reflects an important reality of the stratigraphy of the site in Miercurea Sibiului – the existence of considerable disturbance due to human activity, rodents and carnivores. In our case, the disturbance was caused by humans – as shown by the stratigraphy. During the 2007 research, we observed that the B<sub>9</sub> dwelling pit continues in surface III (no illustration) and is strongly affected by a pit appertaining to the II/III level (Lumea Nouă culture), the one which follows here to the II horizon complexes, dated Vinča A<sub>3</sub>–B<sub>1</sub>. This complex has an extended, oval shape, with a short axis of small dimensions (2m), and is of very deep (see Plan 11).

In total, this complex comprises 585 fragments (Fig. 8, Tab. 1, Graphic 1). Rough ceramics predominate



**Plan 10.** Miercurea Sibiului-Petriș. The plan of the B<sub>1</sub> dwelling pit.

(43%), followed by semi-fine (37%) and fine (20%). The exterior colour is different from that in earlier complexes, where the nuances of red (reddish, cardinal red, reddish brown) played an important role. In this complex, nuances of brown are predominate (brown 18%, light brown 13%, and dark brown 13%), followed by the nuances of grey (grey-9%, whitish grey-6% and greyish dark-3%). The nuances of brick colour are almost at the same percentage (14%).

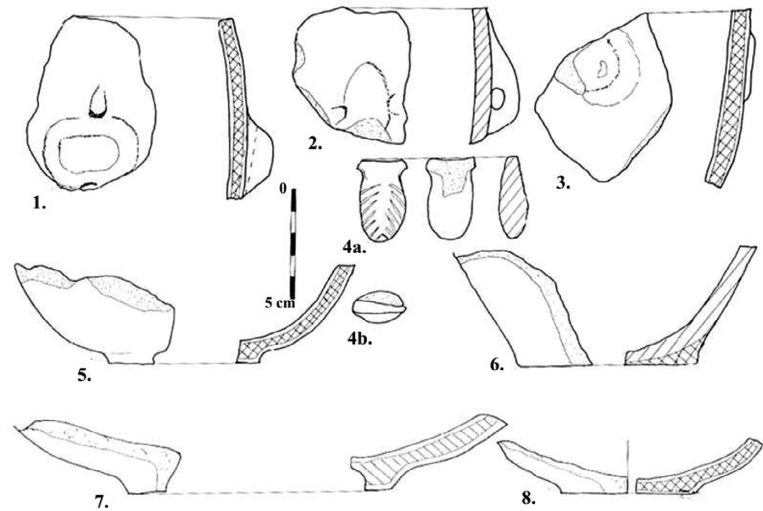
The way that the exterior surfaces were smoothed indicates an affinity for a higher quality of product through the polished (30%) and smoothed (27%) surfaces. In the same context, the barbotine technique can be observed in 25% of the material. The ceramic paste contains sand and husk (45%), or husk and sand (28%) as a degreaser. The fragments containing sand of various consistencies are not more than 14% of the total of the analyzed fragments. The greater parts of the fragments have no decoration (74%). The barbotine (25% (barbotine is considered to be a technique for treating surfaces, as well as a type of decoration) predominates, while the remainder of decorative types comprise about 1% (applications, pinches, nail impressions, incisions and cuts).

#### ***The chronological and cultural integration of the Ic sub-level***

The archaeological material discovered in this dwelling pit also appertains to the Starčevo-Criş culture. As we could observe from a study of the ceramics, there is a *hiatus* between the settlements characteristic of the Ia-b and sub-levels. The ceramics with barbotine appear in such a great number - being decorated in the technique of organized barbotine (Fig.



**Photo 2. Miercurea Sibiului-Petriş. Painted sherds from the Gr<sub>26</sub> pit (no scale).**



**Fig. 6. Miercurea Sibiului-Petriş. Sherds from the B<sub>1</sub> dwelling pit.**

8) - that we are led to the opinion that we are dealing with a moment of 'starčevisation', integrated after the IIB phase of the Starčevo-Criş culture.

#### **The statistics of the analyzed complexes**

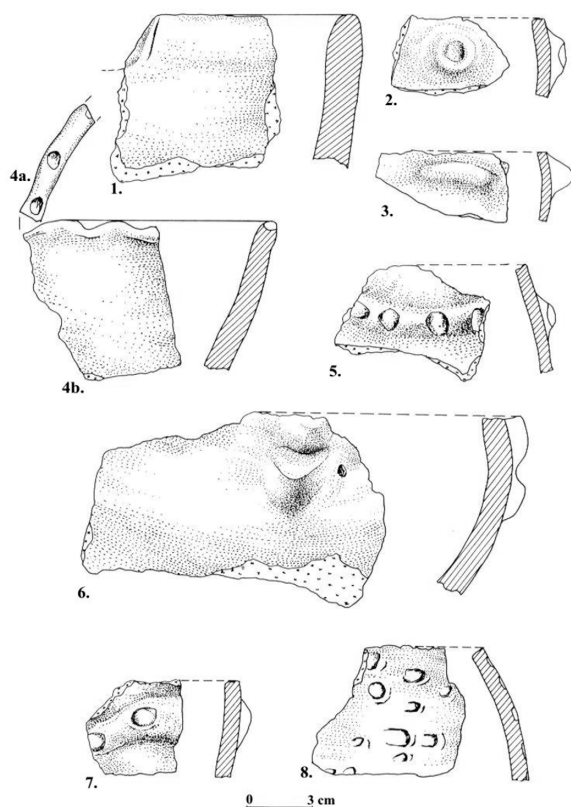
In Table 1 and on the Graphic 1 the materials of the complexes we are concerned with, are analyzed. Thus, B<sub>10</sub>, B<sub>19</sub>, G<sub>26</sub>, B<sub>17</sub> were examined almost completely. B<sub>1</sub> comprises partial results because of the exterior disturbances which affected its structure. B<sub>9</sub> was researched in 2003 and 2007, when the bulk of the ceramic fragments were recovered.

The situation is relatively constant regarding the extant relation between the three categories of ceramics. Thus, for the B<sub>10</sub>, B<sub>19</sub>, G<sub>26</sub>, B<sub>17</sub> and B<sub>1</sub> complexes, there is a larger proportion of semi-fine rough ceramics, while B<sub>9</sub> is the only complex having a higher percentage of rough ceramics.

The most substantial differences are registered for the fine category, with B<sub>10</sub> and B<sub>1</sub> having values over 40%.

Apart from the B<sub>1</sub> complex (comprising a small number of fragments for each category), the other complexes yielded a constant number of fine ceramic fragments (between 119 and 162 fragments).

We believe that the analysis of the degrease of the paste, as one of the most important elements defining the technology of ceramics, shows small differences between the three sub-levels, constituting, along with the analysis of the categories of ceramics, a ba-



**Fig. 7. Miercurea Sibiului-Petriș. Sherds from the B<sub>1</sub> dwelling pit.**

sic argument for ‘dividing’ the level corresponding to the Upper Neolithic in Miercurea Sibiului-Petriș.

Thus, in the case of the B<sub>10</sub> dwelling pit, we observe a certain prevalence of the combination based on ‘sand and husk’ (the order is given by the element that predominates) (87%), ‘husk and sand’ totalling only 4% (the sum of the two categories having values of 91%). We present the combined values for the two types of degreaser ‘sand and husk’ and ‘husk and sand’, as the analysis of the ceramics is done macroscopically and could sometimes cause confusion regarding the prevalence of one or another component. B<sub>19</sub> demonstrates a contrasting situation, favouring degreaser containing ‘husk and sand’ in 40%, the other combination of ‘sand and husk’ having a percentage of 24% (the sum of the two categories having values of 64%). There is to be noted the introduction of ‘pounded shivers’ in three different mixtures, amounting to 21% of the total of ceramic fragments in this complex. In which regard, the G<sub>26</sub> pit we consider to belong, with the other two units described above, to the Ia sublevel; it presents a slightly different situation: the ‘husk and sand’ have values of 63%, ‘sand and husk’ 16% (the total being 79%), while the mixtures with ‘pounded shivers’ total 8%.

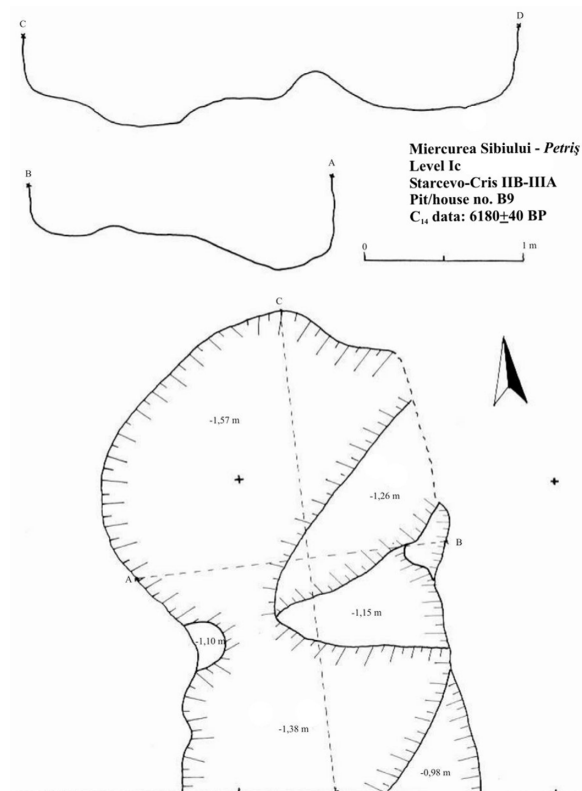
The Ib sub-level includes, as the most representative complexes, the B<sub>17</sub>, B<sub>20</sub>, B<sub>21</sub> and B<sub>1</sub> dwelling pits. For B<sub>1</sub>, the values of the two categories (‘sand and husk’, ‘husk and sand’) total 96%; for B<sub>17</sub>, 74% (this complex presents a large range of combinations of different materials for a degreaser), for B<sub>20</sub>, 88%, and for B<sub>21</sub>, 85%.

Up to this moment, B<sub>9</sub> is the only identified unit integrated in the Ic sub-level. In our estimation, the percentage of the two categories is 74%.

A common element is also to be observed regarding the technological aspect of ceramics processing in the early Neolithic communities, as shown by the site at Petriș: the two types of material used as a supplement for the rough material (clay), husk and sand and sand and husk, have a percentage higher than 60% in the case of every unit analyzed, a fact that could indicate a ‘rule’ through several phases in the evolution of the Starčevo-Criș cultural complex at the Miercurea Sibiului site.

## Conclusions

The earliest manifestation of the Neolithic in Transylvania is the Starčevo-Criș cultural horizon, as defined by most scholars in the specialized literature of the



**Plan 11. Miercurea Sibiului-Petriș. The plan of the B<sub>9</sub> dwelling pit.**

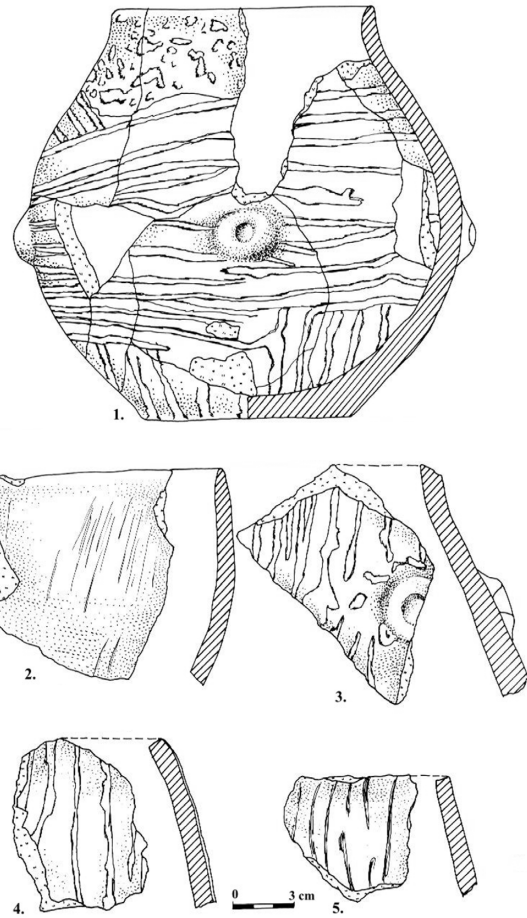
last three decades (*Vlassa 1966.9–48; Lazarovici 1975.8–12; 1977.34–42; 1979.39–56; 1983.9–34; 1984.49–104; 1992.25–59; 1993; Dumitrescu 1983.69; Ursulescu 1984.90; Paul 1989.3–28*).

The mode dissemination by the newcomers was determined – to all appearances – by the existence of some areas newly uncovered from under glaciers. This is the only way of explaining the conclusion of Breunig regarding Europe, obtained through the correlation of all the  $^{14}\text{C}$  data (in the BC period) having a natural and direct relation to the process of Neolithisation (*Breunig 1987.86*).

Concerning the terminology for naming the Neolithic newcomers, we are circumspect regarding the acceptance of the idea that the old phases of the Starčevo-Criş cultural complex must be considered ‘a genetic phase of the Starčevo-Criş culture’ (*Pavúk 1993.231; Brukner 2000.287*). Especially in Transylvania, the defined terminology for the concept of Precriş culture (*Paul 1989; 1995; Ciută 1998; 2000; 2001*) is based on the scarcity of precise observations, complete research of the archaeological complexes, statistics, complete analysis, and horizontal and vertical stratigraphies (*Lazarovici 2001.42–45*).

The existence of a ‘first Neolithic wave’, represented through the ‘aceramic’ or ‘pre-ceramic’ Neolithic horizon, as discovered in Thessaly (*Milojčić 1959.230–232; 1960; Benac 1978.16; Garašanin 1978.34; 1980.58*) or in other locations, especially in caves (*Benac 1971.98*), cannot be a demonstration of the situation in Transylvania. The closest site and associated assemblage of this cultural and chronological horizon was hypothesised at Dârţu-Ceahlău (*Păunescu 1958.269–271; Berciu 1958.91–98*), which proved to be of later date (*Vlassa 1964.463–464*).

The evolution of the large Carpatho-Balkan cultural complex of the Early Neolithic, Starčevo-Criş – a component of the Balkano-Anatolian complex of the Early Neolithic (*Garašanin 1978.32–33, 35–38; 1980*) – begins in Transylvania, at least theoretically, at the same time as the ‘Frühkeramik’ or ‘Monochrom’ phase (*Milojčić 1949; 1959; Milojčić-Zumbusch 1971.25*). The archaeological materials of this phase are shown hypothetically at Romanian sites (*Lazarovici 1977.34; 1979.17; 1984.53–55*). The existence of the monochrome, fine and polished ceramic, is beyond doubt, present among the other pottery in all the locations yielding early Neolithic ceramics in Transylvania (*Paul 1989.20*). It is enough to mention here the settlements at Gura Baciului I



**Fig. 8. Miercurea Sibiului-Petriş. Sherds from the B<sub>9</sub> dwelling pit.**

(*Vlassa 1976.198–264; Lazarovici and Kalmar 1995.199, 201*), Ocna Sibiului-Triguri I and II (*Paul 1989; 1995.28–68*) and Miercurea Sibiului-Petriş Ia-b (*Luca 2002; 2004; Luca et alii 1998; 1999; 2000a; 2001; 2002*).

Perhaps the most important location pertaining to the primary moment of Neolithisation – ‘post aceramic’ is at Cluj-Gura Baciului. The first (I) horizon here (*Vlassa 1976.198–264*) comprises archaeological complexes beginning their evolution as early as the IA phase of the Starčevo-Criş cultural complex (*Lazarovici and Kalmar 1995.63, 68–79*). The most important dwelling complex is the B<sub>2A</sub> dwelling pit, considered by its discoverers to be the oldest Neolithic (*Lazarovici and Kalmar 1995.68–69*). Other complexes and archaeological materials – along with those in the B<sub>1</sub> dwelling pit and G<sub>1a</sub> pit, the B<sub>8</sub> dwelling pit, the B<sub>2A1</sub> dwelling pit, the G<sub>11</sub> pit, the B<sub>9B</sub> dwelling pit, the G<sub>33</sub> pit, and the B<sub>10</sub> and B<sub>2B</sub> dwelling pits – are part of horizon I at Gura Baciului (*Lazarovici and Kalmar 1995.68–79*), considered by Vlassa to be parallel with the ‘Protosesklo’ stage (*Vlassa 1976.257–260*).



**Photo 3. Miercurea Sibiului-Petriș. The bucranium idol from the B<sub>1</sub> dwelling pit (no scale).**

An important location of the early Neolithic in Transylvania is at Ocna Sibiului-Triguri (Paul 1989; 1995. 28–68), considering its stratigraphy and archaeological material. The first three successive levels of this site (Ia–IIa) appertain to the ‘Protosesklo’ horizon. The IIb level could appertain to the transit phase to the Criș culture (a synchronic phase with Gura Baciului II); while the last two levels – IIIa–IIIb – appertain to some sequences of the Starčevo-Criș cultural complex (Paul 1989.10). He suggested that the ‘Protosesklo’ horizon appears as a distinct culture, having a relatively long evolution, which he names ‘Precriș’, two regional aspects of which were noticed north of the Danube: the ‘Wallachian aspect’ in Cârcea (Oltenia) and the ‘Transylvanian aspect’ in Ocna Sibiului-Gura Baciului, observing the existence of two developing stages as well – I and II (Paul 1989.11). Against a unitary evolution of the early Neolithic in the northern zone of the Balkans, under the name of Starčevo-Criș cultural complex (Lazarovici 1992.27), Paul is seeking a detailed phase I and partial phase II of this chronological system, which was not confirmed directly in the context of the newest discoveries in Transylvania, especially in Gura Baciului or Miercurea Sibiului-Petriș. It is to be observed that, no matter in what perspective we consider the development of the first Neolithic phases (such as the Starčevo-Criș cultural complex, phase I and partial II, or Precriș I–II, or a cultural group – or culture – Gura Baciului-Cârcea), the recent discoveries will lead to the required nuances and reconsiderations. Finally, we notice that, in the publication of this site, no clear observations were made of the dwellings and the evolution of the ceramics at each successive level of the dwellings. Analysing the published material, we could offer the opinion that – besides the consideration that the author has other data – the oldest dwellings here would be a dwelling pit (Paul 1995.30–31, Abb. 2) for Precriș Ia phase, along other one in SXII (Paul 1995.Abb. 5), and a semi-dwelling pit (Paul 1995.30–31, Abb. 2), dwelling 9 and a pit (Paul 1995. Abb. 5, 6) for the Precriș Ib phase. Without renouncing to a research system based on the prospect of the stratigraphy in narrow

sections, the author remains captive to some theoretical concepts which are only tangentially based on the data from a thorough analysis of both the architecture and the artefacts (Lazarovici 2001.42).

The observations made in Transylvania, as well the latest discoveries, compel us to draw attention to the Early Neolithic cultural penetration along the valley of the River Olt to Ocna Sibiului, continuing (Miercurea Sibiului – thermal springs) towards the salt mines at the far north curve of the central stretch of the River Mureș and towards the settlement at Gura Baciului. It is difficult to consider that we are dealing with migration in the real sense of the word (Lazarovici and Kalmar 1995.42–43), especially because the data relating to ceramic technology do not match those from Thessaly, for example. The ways of diffusions are not clear (Lazarovici and Kalmar 1995.42–43). We have to accept that, for the time being, these remain the only possible definitions if we consider them in succession: migration and diffusion. However, the Ib level is – in the case of the location at Miercurea Sibiului – the association of a piece of bucranium type with the ceramics of the B<sub>1</sub> dwelling pit which compel us to integrate the artefact and the archaeological complex in the IC–IIA phase of the mentioned culture. As a consequence, it is contemporary with Gura Baciului I (a part of the complexes: the B<sub>8</sub> dwelling pit, B<sub>2A1</sub> dwelling pit, the G<sub>11</sub> pits, the B<sub>9B</sub> dwelling pit, the G<sub>33</sub> pit, the B<sub>10</sub> dwelling pit and B<sub>2B</sub> dwelling pit) (Lazarovici and Kalmar 1995.68–79) or with Precriș Ib – the pit, semi-dwelling pit, dwelling 9 (Paul 1995. 30–31, Abb. 2, 5–6) and dwelling 1/1997 in Șeușala cărarea morii (Ciută 1998; 2000). To the same chronological and cultural horizon appertains the archaeological site discovered in Cerișor-Peștera Cauce.

A new horizon presenting mainly *monochrome* ceramics could be defined among the latest discoveries at Cerișor-Peștera Cauce, where there is cultural layer in which the ceramics are mainly fine and poli-

The Stratigraphic Position	The Complex Code	Rough	Semi-fine	Fine
Sub-level Ia	B10	65	155	162
	B19	251	322	147
	G26	151	233	119
Sub-level Ib	B17	246	288	115
	B1	31	52	58
Sub-level Ic	B9	248	218	119

**Tab. 1. Distribution of ceramic fragments from the analysed complexes.**

shed, but we cannot give it a definite date. We note that no painted ceramic fragments were discovered here.

On the other hand, the existence of this kind of settlement in Romania was announced by the discovery in Iosaş-Anele (Luca and Barbu 1992–1994). Some Romanian researchers preferred to integrate the early Neolithic settlements that presented no painting ('Monochrom' in the Dimitrijević (1974) system), in the IC–IIA phase of this large cultural complex, the chronological level at which was stipulated the disappearance – or the very rare appearance – of painting (Lazarovici 1979:43). That is characteristic, however, of the IA phase as well, and it is certain that there are other characteristics which made the period at the beginning of Neolithic a separate unit. Considering our knowledge, the painting of white dots develops in the IB and IC phases of the Starčevo-Criş cultural complex, while its presence in other periods is rather accidental.

As a matter of fact, the ceramics painted in white appear quite rarely in Şeuşa-La cărarea morii (3–4 fragments) (Ciută 2000:67–68, Fig. 25/1–3), so the author suggests that the ceramic material here is monochrome, chromatically speaking (Ciută 2000:65). The same author though, expresses in other pages of the same work, his doubts about the existence of a 'Monochrom' horizon in Romania (Ciută 2000:76). We are to conclude that, until complete research of an old Neolithic site the north of the Danube, we cannot clearly envisage which the characteristics of a possible 'Monochrom' horizon could be (be it the oldest or more recent in the chronological perspective). If so, we must avoid the integration of some dwellings with painted ceramic fragments – a few – in the IA phase of the Starčevo-Criş cultural complex!

We may hypothesise the 'Monochrom' (in Dimitrijević's perception), would mark the second migration suggested by Lazarovici and Kalmar (1995:200; Lazarovici 2001:42).

Now, the 'traditional' way of Early Neolithic cultural penetration in Transylvania (via Oltenia) is doubled by another, towards the south-west (Banat), of which vestiges are to be found, most probably, in the karst caves

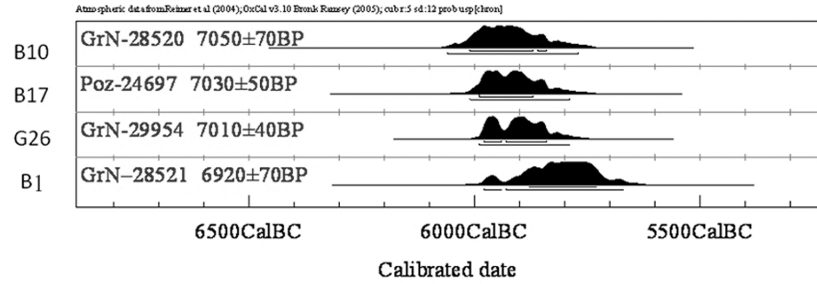
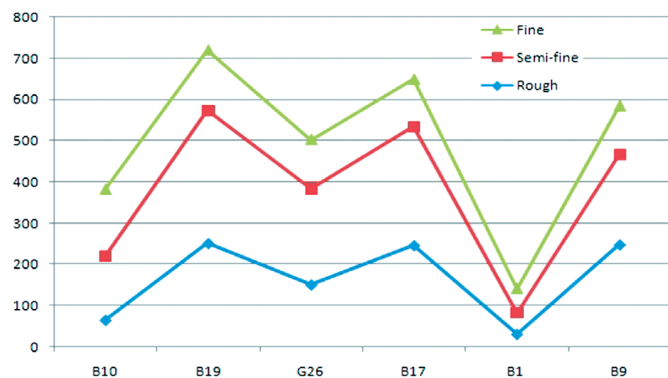


Fig. 9. Miercurea Sibiului-Petriş – plot with radiocarbon data from Early Neolithic complexes.

of Poiana Ruscă Mountains, as well, or in the south Apuseni Mountains (Cerişor-Peştera Cauce, see Luca et al. 1997:19, 24, or Crăciuneşti-Peştera Balogu, see Roman et Diaconescu 2001:7–8). The biggest problem remains the unsatisfactory state of archaeological research in this area, with many of the karstic formations here remaining un-researched or even unidentified. The supposed way of access would have been developed step by step, with the result that, in the period of 'starčevisation' of the communities in southern Transylvania, the way along the valley of the Oltul River was closed for a while.

The phenomenon of 'starčevisation' was linked to the end of the second Starčevo-Criş phase in Transylvania, (Paul 1989:18). The settlement in Ocna Sibiului-Triguri loses its importance, failing to develop painting in black, characteristic of the late horizons of the cited cultural complex (Paul 1989:21). The early Neolithic locations in the valley of the middle Mureş River develop (Miercurea Sibiului-Petriş and Pustia, Orăştie-Dealul Pemilor, point X8, Limba-Bordane etc.) under the cultural influence of the west and south-west such elements as barbotine, applied ornament, incision or 'impresso' decorative motifs (Paul 1989:21) along with painting in black (Draşovean 1981:42), or altars with leg-like postaments with eyes marked on them (Luca et al. 1998). All these observations demonstrate that we still can



Graphic 1. The distribution of the sherds number through complexes.

discuss cultural unity over large areas, a fact that was accepted under the name of the Starčevo-Criș cultural complex even by Paul (Paul 1989:24).

It is possible now to integrate the discoveries in Ocna Sibiului-Triguri IIa and Miercurea Sibiului-Petriș, the B<sub>9</sub>/2003 dwelling-dwelling pit, in the vertical and horizontal stratigraphy here.

Even if there are some differences in comparison with the above described complexes, we notice a technological unity, easy to demonstrate, and an evolution having common roots which generated the complexes in Miercurea Sibiului-Petriș.

The influences generated in Transylvania from the Banat region and the plain of the Tisa River, and from south of the Danube, become more and more visible in the III<sup>rd</sup> phase (Gh. Lazarovici's system) of

the Starčevo-Criș cultural complex. At the same time as the middle of this phase, the appearance of the first Vinča communities in Transylvania is to be observed (Luca 1995–1996; Luca et al. 2000; 2000b).

The evaluation of the data of absolute chronology in the development area of this cultural complex (see Tab. I) indicates the relative contemporaneity of the Ia sub-level in Miercurea Sibiului with the Ib and II level in Anza, partially with the 'Monochrom' level in Donja Branjevina, with Gura Baciului, Ocna Sibiului (level VIII), Șeușa, Foeni-Sălaș. Miercurea Sibiului Ib has the same chronological level as Donja Branjevina (the red on white level), Endrőd 39, Anza II, Foeni-Gaz, Dudeștii Vechi, Endrőd 119, Biserna Obala-Nosa, Szarvas 23 etc. The last sub-level of the site in Petriș was wrongly dated to 6180 ± 40 BP, due to its being intersected by a later pit.

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## Appendix

Tab. 2. The absolute chronology data for the Starčevo-Criş cultural complex.

Phase	Settlement	LABNR	BP	Error	Description
IA Monochrome	Anza Ia	LJ-2181	7270	140	unspecified
Starčevo, white on red painted	Grivac Barice	Bln-869	7250	50	Sonda B
White on red, IB-IIA?	Anza Ib	LJ-2341	7230	170	unspecified
IA Monochrome	Anza Ia	LJ-3032	7210	50	unspecified
IA Monochrome	Anza Ia	LJ-2330-31	7170	60	unspecified
Monochrome – IA	Donja Branjevina	GrN-15974	7155	50	layer III, trench V/1986-1987 pit dwelling
IA Monochrome	Anza Ia	LJ-3183	7150	50	unspecified
IB-IC	Gura Baciului	GrA-24137	7140	45	structure in trench E-D, square 8
IA Monochrome	Anza Ia	LJ-3186	7140	70	unspecified
Monochrome – IA	Donja Branjevina	GrN-15976	7140	90	layer III, trench V/1986-1987 outside dwelling pit
White painted horizon	Magareći Mlin	GrN-15973	7130	60	unspecified
White on red, IB-IIA?	Anza Ib	LJ-2339	7120	80	unspecified
Pre-Criş? IB-IC	Ocna Sibiului	GrN-28110	7120	60	layer VIII
White on red, IB-IIA?	Anza Ib	LJ-2332	7110	120	unspecified
White on red, IB-IIA?	Anza Ib	LJ-2342	7100	80	unspecified
Early Körös	Gyálarét –Szilágyi	Bln-75	7090	100	
IB-IIA	Anza II	LJ-2337	7080	60	unspecified
IIA-IIB	Foeni Sălaş	GrN-28454	7080	50	dwelling pit, square 5, level 7, locus 23, Bos sp. Radius
Monochrome –IA	Donja Branjevina	OxA-8557	7080	55	layer III, trench 2/1987
Precriş? SCIB-IC	Şeuşa	GrN-28114	7070	60	level
IB-IC	Miercurea Sibiului Petris	GrN-28520	7050	70	B <sub>10</sub> /2003, level Ia
IB-IIA	Anza II	LJ-2351	7040	90	unspecified
IB-IC	Miercurea Sibiului Petris	GrN-29954 29954	7010	40	G <sub>26</sub> /2005, nivel Ia, ritual pit
Linear A Phase, IB-IIA	Zadubravlje	Z-1 nec	6995	115	pit 10
IIB	Dudeştii Vechi	GrN-28111	6990	50	neolithic ditch, trench 1, sector E4-5, cervus elephus, humerus dx
Körös	Röszke-Lúdvár	Deb-2730	6972	59	unspecified
mid-late Körös	Endrőd 39	BM-1668R	6970	110	unspecified
IB-IIA, White on red	Donja Branjevina	GrN-15975	6955	50	unspecified
mid-late Körös	Endrőd 39	BM-1870R	6950	120	unspecified
mid-late Körös	Endrőd 39	BM-1863R	6950	140	unspecified
IB- IIA	Anza II	LJ-2405	6940	80	unspecified
IIB	Dudeştii Vechi	GrN-28113	6930	50	trench 3, sector A2, cm 165, Bos sp. Astragalus
IIB	Foeni- Gaz	GrA-25621	6925	45	dwelling pit 1, cm 125, Long bone flake
IC-IIA	Miercurea Sibiului Petris	GrN-28521	6920	70	B <sub>1</sub> /2003, level Ib
IIIA	Dudeştii Vechi	GrA-24115	6920	80	Trench 3, sector A, cm 75-80, bone perforator
IB-IIA, White on red	Endrőd 119	OxA-9587	6915	45	unspecified

Phase	Settlement	LABNR	BP	Error	Description
II B	Măgura	Wk-14435	6896	61	
IB-IIA, White on red	Endrőd 119	OxA-9583	6895	45	unspecified
IB-IIA, White on red	Biserna Obala-Nosa	OxA-6875	6875	55	unspecified
IB-IIA, White on red	Ludoș-Budžak	OxA-8554	6875	55	unspecified
IIIA	Pața	GrN-28460	6860	60	dwelling pit 1, trench II, square 7–5, cm 380, Cervus Elaphus, metatarsal
IB-IIA, White on red	Szarvas 23	OxA-9375	6855	55	unspecified
IB-IIA, White on red	Endrőd 119	OxA-9588	6855	45	unspecified
IB-IIA	Anza II	LJ-2409	6850	50	unspecified
IB-IIA, White on red	Endrőd 119	OxA-9586	6850	45	unspecified
Linear Phase, IB-IIA	Donja Branjevina	OxA-8555	6845	55	Layer III
II	Dudeștii Vechi	GrA-26951	6845	40	Acorn (Quercus sp.)
White on red, IB-IIA?	Anza Ib	LJ-2333	6840	100	unspecified
Linear Phase, IB-IIA	Zadubravlje	Z-2 nec	6835	110	unspecified
Körös	Méhtelek-Nádas	Bln-1331	6835	60	pit 1–3/a
II B	Măgura	Wk-14436	6833	53	
mid-late Körös	Endrőd 39	BM-1971R	6830	120	unspecified
IIB-IIIB linear and spiral	Soroca II	Bln-586	6825	150	unspecified
IB-IIA, White on red	Endrőd 119	OxA-9584	6825	45	unspecified
IB-IIA, White on red	Endrőd 119	OxA-9582	6825	45	unspecified
IIIA	Dudeștii Vechi	GrN-28876	6815	70	trench 1, sector C, Square 1 and 2, oven, quercus and ulmus charcoal
IB-IIA, White on red	Endrőd 119	OxA-9590	6815	50	unspecified
Protostarčevo, IB-IIA	Donja Branjevina	GrN-24609	6810	80	layer II
IB-IIA	Anza II	LJ-2338	6800	140	unspecified
IB-IIA, White on red	Endrőd 119	OxA-9585	6795	50	unspecified
II B	Măgura	Wk-14437	6784	56	
Early Körös	Szarvas 23	BM-1866R	6780	110	unspecified
Linear Phase, IB-IIA	Donja Branjevina	OxA-8556	6775	60	Layer III
Starčevo	Mostonga III	GrN-24117	6750	50	level
IB-IIA, White on red	Biserna Obala-Nosa	OxA-8540	6740	75	unspecified
IB-IIA, White on red	Biserna Obala-Nosa	OxA-8552	6725	60	unspecified
IB-IIA, White on red	Endrőd 119	OxA-9589	6720	45	unspecified
III	La Hoțu Cave	Sac-2001	6710	80	unspecified
Linear Phase, IB-IIA	Zadubravlje	Z-3 nec	6705	95	unspecified
IB-IIA, White on red	Biserna Obala-Nosa	OxA-8553	6705	55	unspecified
IB-IIA	Anza II	LJ-2345	6600	110	unspecified
IIB-IIIB linear	Golokut Vizic	OxA-8695	6520	50	unspecified
IIB-IIIB	Anza III	LJ-2185	6510	110	unspecified
III/IV?	Valea Răii-Copăcelu	KN-I.102	6480	75	
Starčevo end	Starčevo	GrN-9033	6475	60	unspecified
Körös	Hódmezővásárhely-Kotacpart	Bln-115	6450	100	potsherd
IV sau Cârcea III	Cârcea Viaduct	Bln-1982	6430	60	unspecified
IIB-IIIB linear and spiral	Gura Baciului	Lv-2157	6400	90	grave M6
Early Körös	Szarvas 23	BM-1865R	6400	170	unspecified
IV, Cârcea III	Cârcea Viaduct	Bln-1983	6395	60	
IIB-IIIB linear and spiral	Trestiana	Lv-2155	6390	100	unspecified
IV	Limba – Bordane	GrN-28112	6290	50	L3 house, square 6–8, cm 110–130