Radiocarbon data from the Turdaș-*Luncă* archaeological site. Petrești culture (preventive research of 2011) (II)

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Abstract: The preventive archaeological excavations from 2011 made possible the unveiling of a significant part of the archaeological site from Turdaș, *Luncă* point. There were researched thousands of archaeological features, the defensive system of the site, the habitation neighborhoods and some other results of the human works (C_{403} and C_{1878} features) (romanian variante: Luca *et al* 2017).

The archaeological feature C_{403} is in area called C (plan 1) (Lazarovici *et al* 2014, Fig. 2; 28-30.). A part of this sector has been analyzed (ST29) some time ago in an ample article (Lazarovici *et al* 2014). In fact, in connection with this structure seems to be C_{403} (Lazarovici *et al* 2014, p. 78, 79, 101-102). The feature is filled with black, granular soil (Lazarovici *et al* 2014, Fig. 28/b). This type of soil is formated, at Turdaș, during the Petrești inhabitation and we called him *eneolithic humus* (Luca 2001, p. 40).

It is obvious that C_{403} is – in fact – the rest of a dwelling, which is very poorly preserved and represents a higher deposition level, covering the ruins kept from the dwellings with floor of the upper level, Turdaș III (Lazarovici *et al* 2014, p. 86).

The pottery of the dwelling is – obviously – Petrești (photo 1-2) (Lazarovici *et al* 2014, Fig. 28/a, c). Few preserved archaeological materials show a technique like in AB phase of culture, as defined by I. Paul (Paul 1992).

C_{1878} is a feature with a circular shape (column foundation) and is in sector B (plan 2, indicated by a blue arrow). She was partially covered by lateral debris of the C_{340} (plan 2 was drawn after removing all the debris that was in secondary poistion;

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the observation belongs to the one who wrote the diary and researched the area, ┼ Florian Dumitrescu-Chioar). The filling of the feature is grayish, black-gray color, with adobe pigment and little charcoal, pottery and bones. Was harvested bone and soil for flotation.

There was no clear link between the C_{340} plstform or the $C_{382-383}$ platform at the time of the research, as the archaeological material in the pit filler was – obviously – Turdaș (C_{340}). The Petrești villagers perforated the Turdaș material to secure the pillar. The large bone deposited in its pit (446,18 gr. – with the plastic envelope wrapper) was – but – contemporary with the builders, as the radiocarbon date obtained (5606±27 BP – fig. 2).

The weight and special size of the bone shows that there was a Petrești ritual, foundation. Perhaps it was hoped that by deposition a special power would be given to the pillar/construction, similar to the size and power of the bull from which the bone came from. But these are difficult to control opinions today.

We note, however, that on the Petrești platforms C_{340} and $C_{382-383}$ did not find in situ Turdaș materials, as we have seen in other times, also in the old excavations from Turdaș-*Luncă*, Miercurea Sibiului-*Petriș* or Tărtăria-*Gura Luncii*.

In the few published articles about the site of Turdaș-*Luncă* (Luca 2001; Luca *et al* 2012; Luca și Suciu 2014; Luca și Suciu 2016), it is easy to see that we have divided – as the programming of the construction sectors demand and the numbers of the archaeological features are not – consequently – from small to the sea, the investigated portions being attacked on briar – in four major sectors: A, B, C and D.

In our first article on radiocarbon data we published two data from sector A (Luca *et al* 2017). Now we publish data from sectors B (C_{1878}) and C (C_{403}).

At this moment we can tell that in sector A we did not find pottery as defined by I. Paul (Paul 1977; Paul 1981; Paul 1992), and in sector D only a part of the fortification seems to be Petrești, relying on the archaeological material from the filling of the improvements. In fact, fortification of the Petrești culture represents – as the inhabitants of the epoch – a rather significant constraint of the area occupied by the eneoliths (the fortification of the Turdaș culture is bigger with a comfortable percentage – over 50%).

Orăștie-*Dealul Pemilor, point* X_2 (Luca 2001, p. 142)	Laboratory code	BP	Feature	Relative dating
Date 1	Deb-5765	6.070±70	Hut B_2/1994	Turdaș I?
Date 2	Deb-5762	5.825±60	Hut B_1/1994	Turdaș II/III (Luca 2001,

				p. 139)
Date 3	Deb-5775	5.790±55	Hut B_2/1994	Turdaș III/III
Cerișor-*Peștera Cauce* (Luca 2014, p. 108, Table 1)				
Date 1	GrN-28994	5.760±40	Gr. 104	Turdaș III
Hunedoara-*Judecătorie* (Tincu 2015, p. 66)				
Date 1	Poz-58369	5.717±35	Feature 4	Turdaș III
Date 2	Poz-58370	5.730±35	Dwelling 1	Turdaș III
Date 3	Poz-56766	5.828±35	Feature 2	Turdaș II/III
Turdaș-*Luncă* (Luca *et al* 2017)				
Date 1T	RoAMS-42.40	5.947±35	Feature 33	Turdaș I/II
Date 2T	RoAMS-46.40	5.932±29	Feature 23	Turdaș I/II
Date 1P	RoAMS-45.40	5.686±28	Feature 403	Petrești
Date 2P	RoAMS-47.40	5.606±27	Feature 1878	Petrești

Table 1. Radiocarbon data for Turdaș sites.

Taking into general consideration the features C_{403} and C_{1878}, it is easy to see, that they relate to the Petrești culture, and the end of the Turdaș culture, phase III, is – already – obvious in this site at the time of 5.700(5.650) BP, and 5.600 BP is the year when we are witnessing to the end of the Petrești culture here.

Seeing these radiocarbon data we observe – and we have to repeat this – that in BP data, Turdaș culture is already formed at 6.000(5.950) BP and around 5.700 BP culture is at the end of its final phase (III).

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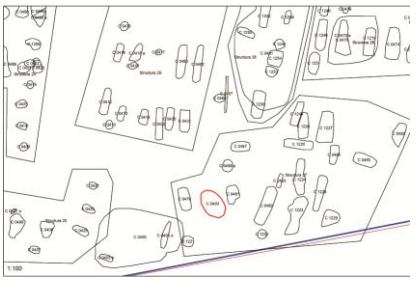
Table 1. Radiocarbon data for Turdaș sites.

List of abbreviations

ActaTS	- *Acta Terrae Septemcastrensis*, Universitatea „Lucian Blaga", Sibiu
AnB(SN)	- *Analele Banatului. Serie Nouă*, Muzeul Național a Banatului, Timișoara
Apulum	- *Apulum, Acta Musei Apulensis*, Muzeul Național al Unirii, Alba Iulia
BB	- *Bibliotheca Brukenthal*, Muzeul Național Brukenthal, Sibiu
PZ	- *Prähistorische Zeitschrift*, Berlin-Leipzig
SCIVA	- *Studii şi Comunicări de Istorie Veche şi Arheologie*, București

Bibliography

Lazarovici *et al* 2014	- Gh. Lazarovici, S.A. Luca, Gh.V. Natea, C.I. Suciu, M. Căstăian, *Turdaș, C sector. Reconstruction of feature or ST 29 based on ethno-archaeological studies*, în *ActaTS* 13 (2014), p. 73-112.
Luca 2001	- S.A. Luca, Așezări neolitice pe valea Mureșului (II). Noi cercetări arheologice la Turdaș-*Luncă*. I. Campaniile anilor 1992-1995, în *BMA* 17 (2001).
Luca 2014	- S.A. Luca, Arts and Religious beliefs in the Neolithic and Eneolithic from Romania, în *BB* 67 (2014).
Luca și Suciu 2014	- S.A. Luca, C.I. Suciu, *Sistemul de fortificații eneolitice de la Turdaș-**Luncă**, județul Hunedoara, România*, în *Banatica* 24 (2014, 1), p. 7-24.
Luca și Suciu 2016	- S.A. Luca, C.I. Suciu, *The Eneolithic fortification system of Turdaș-**Luncă**, Hunedoara Counthy, Romania*, în Pradziejowé osady obronne w Karpatach (Krosno, 2015), p. 43-60.
Luca *et al* 2011	- S.A. Luca (coord.), Cercetările arheologice preventive de la Turdaș-***Luncă*** (jud. Hunedoara). Campania 2011, în *BB* (2011).
Luca *et al* 2017	- S.A. Luca, ┼Florian Dumitrescu-Chioar, Tiberiu Bogdan Sava, Doru Păceșilă, Oana Gaza, Iuliana Stanciu, Gabriela Sava, Bianca Ștefan, *Date radiocarbon din situl arheologic de la Turdaș-**Luncă** (cercetările preventive ale anului 2011) (II)*, în *AnB(SN)* 25 (2017), p. 35-40.
Paul 1977	- I. Paul, *Periodizarea internă a culturii Petrești în lumina evoluâiei ceramicii pictate*, în *StComB* 20 (1977), p. 15-26.
Paul 1981	- I. Paul, *Der gegenwärtige Forschungsstand zur Petrești- Kultur*, în *PZ*, 56 (1981, 1) p. 197-234.
Paul 1992	- I. Paul, Cultura Petrești, București (1992).
Tincu 2015	- S. Tincu, *Cercetările arheologice de la Hunedoara. Considerații privind încadrarea culturală și cronologică a descoperirilor*, în *AnB(SN)* 23 (2015), p. 63-88.



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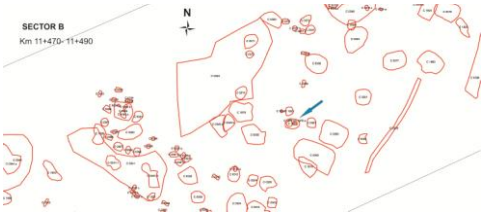

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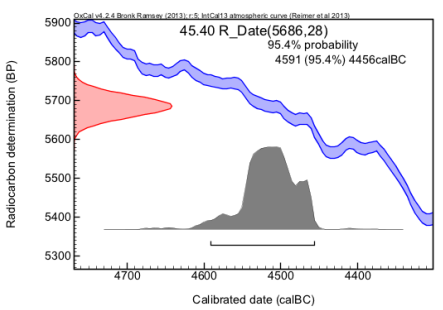

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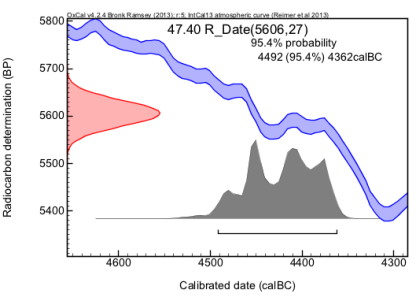

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