

New data on the absolute chronology of the Sântana de Mureș-Černjachov Culture in southeastern Transylvania (Covasna County, Romania)

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Abstract. This paper presents a newly obtained radiocarbon date from a layer attributed to the Sântana de Mureș-Černjachov culture, which is the first such date from southeast Transylvania published for the period in question. The sample was selected from a large mammal bone discovered at the *Reci-Telek* site in Covasna County, Romania. The aim of this study is not to discuss the chronology of the period, but to introduce the obtained date into scientific circulation. Calibration at 2- σ resulted in a date ranging between 247 and 404 cal AD.

Keywords: Sântana de Mureș-Černjachov culture; radiocarbon dating; 3rd-4th centuries AD; Migration Period.

Date noi privind cronologia absolută a culturii Sântana de Mureș-Černjachov în sud-estul Transilvaniei (județul Covasna, România). În articol este prezentată o dată radiocarbon obținută dintr-un strat de ocupare atribuit culturii Sântana de Mureș-Černjachov, prima dată de acest fel publicată pentru perioada respectivă din sud-estul Transilvaniei. Proba prelevată provine dintr-un os de mamifer de talie mare, descoperit în situl *Reci-Telek* din județul Covasna, România. Scopul lucrării nu este discutarea cronologiei, ci introducerea datei obținute în circuitul științific. Calibrarea la nivel de 2- σ probabilitate a condus la o dată cuprinsă în intervalul 247-404 cal AD.

Cuvinte cheie: cultura Sântana de Mureș-Černjachov; datare radiocarbon; secolele III-IV d. Hr.; perioada migrației.

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Introduction

The period of the Sântana de Mureș-Černjachov culture (3rd-4th centuries AD) is probably the best-known part of the long Migration Period in Romania. The state of research in the country differs significantly from one province to another. While

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in Moldavia and Muntenia there are several cemeteries and settlements that have been excavated and published more or less properly (Diaconu 1965; Mitrea, Preda 1966; Dragomir 2001; Palade 2004; Vornic 2006; Şovan 2009, etc.), in Transylvania, this type of data is much scarcer. Regarding the burials of the period, we have very limited data, because cemeteries similar to those east of the Carpathians with tens or hundreds of graves are as yet missing². Our knowledge of Sântana de Mureş-Černjachov-type settlements is better in southeastern Transylvania. Excavations made in the second half of the 20th century have brought to light several house remains and storage pits, such as those discovered at Sfântu Gheorghe, Reci, and Bezid (Székely 1969, p. 23-64, 69-71). Owing to a series of large surface excavations carried out in the last two decades, the organisation of settlements is better known. Village segments with dwellings and pits were partially excavated at Olteni (in Hungarian, Oltszem) (Buzea, Zăgreanu 2011), located in Covasna County, and also at Miercurea Ciuc (in Hungarian, Csíkszereda) (Botár 2012, p. 234-236, nr. 128; 2015, p. 1-5) and Odorheiu Secuiesc (in Hungarian, Székelyudvarhely) (Körösfői, Nyárádi, Sófalvi 2010, p. 6-7; Körösfői 2011, p. 105), both located in Harghita County.

The chronology of the period has been mainly constructed on various dress accessory and jewellery typologies, and radiocarbon dating being entirely neglected. The aim of this study is to publish a single radiocarbon date obtained from a site in southeastern Transylvania, at Reci-*Telek* (Hungarian Réty). This is the first published absolute date for the Sântana de Mureş-Černjachov culture from southeast Transylvania.

The site

The site at Reci-*Telek* lies on the right bank of the Râul Negru (in Hungarian, Feketeügy) river, on a high, flood-free terrace (Pl. I.). At this site, archaeological excavations were conducted by Zoltán Székely during three campaigns, between 1957 and 1959. The results have been disseminated in various publications and the site has become a reference one for the area for years to come. The Late Bronze Age (“Hallstatt”) Gáva period material was published in 1966 in a small volume dealing with the “Early Iron Age” in southeast Transylvania (Székely 1966, p. 5-16). The Migration Period material was introduced in a scientific manner in 1969 (Székely 1969, p. 50-60). Since then, an integral publication of the material is still lacking, although it could substantially improve our understanding of these cultures. The Migration Period material discovered at the site was attributed to the post-Roman period, referred to as the Sântana de Mureş-Černjachov culture.

² It is worth mentioning the discoveries at Rugăneşti, where three burials were documented, likely belonging to a more extended and later destroyed cemetery (Körösfői 2008, p. 187-207).

The data

During a recent project focused on the chronology of the Late Bronze Age, I sent a bone fragment for radiocarbon dating. In the registry of the local Székely National Museum in Sfântu Gheorghe, the selected bone fragment was introduced as belonging to the Hallstatt period. When I received the report of the analysis from the laboratory in Debrecen, Hungary, it transpired that the respective sample belonged to the 3rd-4th centuries AD (**Table 1**).

No.	Lab no.	Site	Age 14C (BP)	Standard deviance (±)	1 σ calibration (cal AD)	2 σ calibration (cal AD)	Context type	Material
1	DeA-23374	Reci-Telek	1734	30	253-378	247-404	Cultural layer	Animal bone (large mammal)

Table 1. The radiocarbon date obtained from Reci-Telek.

Tab. 1. Data radiocarbon obținută din situl Reci-Telek.

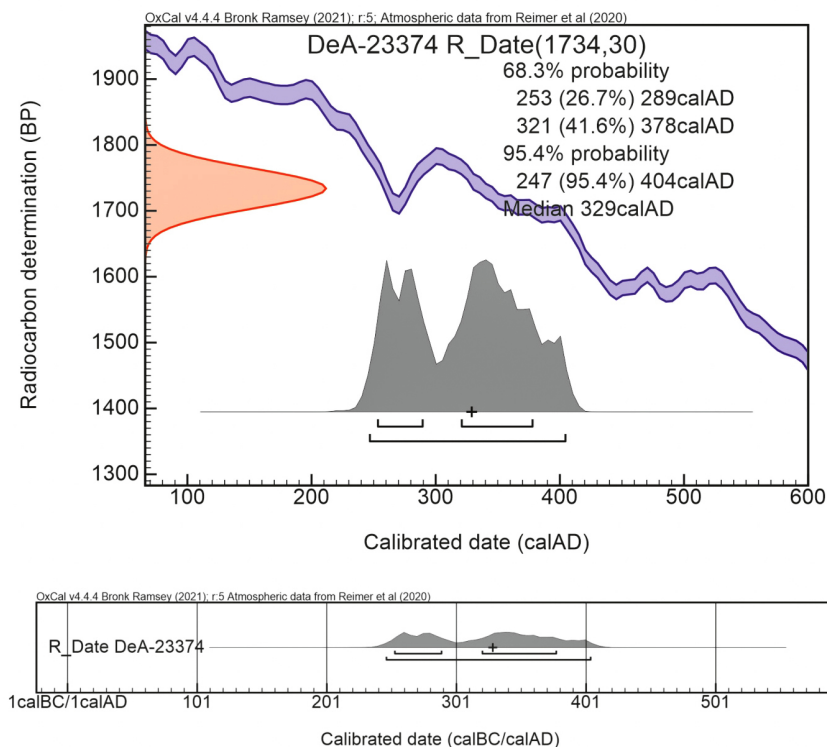


Fig. 1. Calibrated radiocarbon date from Reci-Telek.

Fig. 1. Data radiocarbon calibrată din situl Reci-Telek.

The osseous remains belonged to a large mammal. The ^{14}C -AMS measurement (DeA-23374) provided the date 1734 ± 30 BP. The calibrated data has given a 68.2% probability ($1-\sigma$) for a dating between 253 and 378 cal AD, which corresponds to a 95.4% probability ($2-\sigma$) for a dating between 247 and 404 cal AD. At a $1-\sigma$ level of certainty, the calibration resulted in two main peaks, the first between 253 and 289 cal AD (with a probability of 26.7 %), and the second between 321 and 378 cal AD (with a probability of 41.6 %) (**Fig. 1**). The date was calibrated using the online software OxCal v.4.4.4 (Reimer *et alii* 2020).

Instead of conclusions

For the dating of the Migration Period settlements and burials discovered in the area, typological and numismatic data were used, when possible. The use of radiocarbon dating was neglected, likely due to its large calibration timespan. In recent years, we have witnessed a significant improvement in the method, and it has begun to be used for a more detailed construction of the Migration Period chronology. A large quantity of data, supplemented with various statistical analyses, may confirm or significantly modify our perception of the relevant chronological phases³.

Zoltán Székely, based on a coin of Constantinus II, considered that the area was inhabited by the population of the Sântana de Mureș-Černjachov culture until the second half of the 4th century AD (Székely 1969, p. 83). As we can see, the data obtained from the Reci-*Telek* site confirms the earlier observations made on the chronology of the settlement. The highest probability of dating is between 321 and 378 cal AD. The aforementioned coin was dated between 337 and 373 AD (Lăzărescu 2014, p. 222, nr. 63). Similar dates were obtained for the Miercurea Ciuc-*Fodor-kert* settlement, covering the time-span between 240 and 390 AD (Botár 2018, p. 33)⁴. Evidence for 3rd-4th century AD occupation (one radiocarbon date from wood-charcoal giving a $2-\sigma$ result between 242-375 cal AD) has been attested at Păuleni-Ciuc-*Várdomb* (Kavruk *et alii* 2022, p. 114), approximately 3.5 km northeast of the *Fodor-kert* site. The lack of conclusive archaeological material (pottery) from this period precludes any certainty of cultural affiliation. Two cultural connections have been suggested, with “either the Poieniști-Vârteșcoi cultural group distributed east of the Eastern Carpathians or the Sântana de Mureș-Černjachov culture” (Kavruk *et alii* 2022, p. 120). Another (similar) dating, yet unpublished, has been obtained from the

³ A good example of using ^{14}C data combined with typo-chronological observations has recently been published for the Avar Period (see Szenthe, Faragó, Gáll 2023).

⁴ The integral publication of the dates is forthcoming. Information was kindly supplied by István Botár.

site at Ernei-*Carieră*⁵. Recently was published the monograph of the Sântana de Mureş cemetery, which contains a chronological interpretation, based on 26 radiocarbon dates. All the dates suggests, that the burials belong to the 4th century AD⁶.

My intention was to avoid entering into details of the chronology of the Sântana de Mureş-Černjachov culture, as these were included earlier by researchers who were mainly preoccupied with the relevant period (see, for example, Harhoiu 1990; Opreanu 2003; Stanciu 2008). The wide timespan covered by the calibration does not allow any further, more detailed analysis of the inner evolution of the settlement. The aim here is to introduce the data into the scientific circulation. Over time, we can hope that there will be enough data for detailed statistical analysis to contribute to a better understanding of the post-Roman period in southeast Transylvania.

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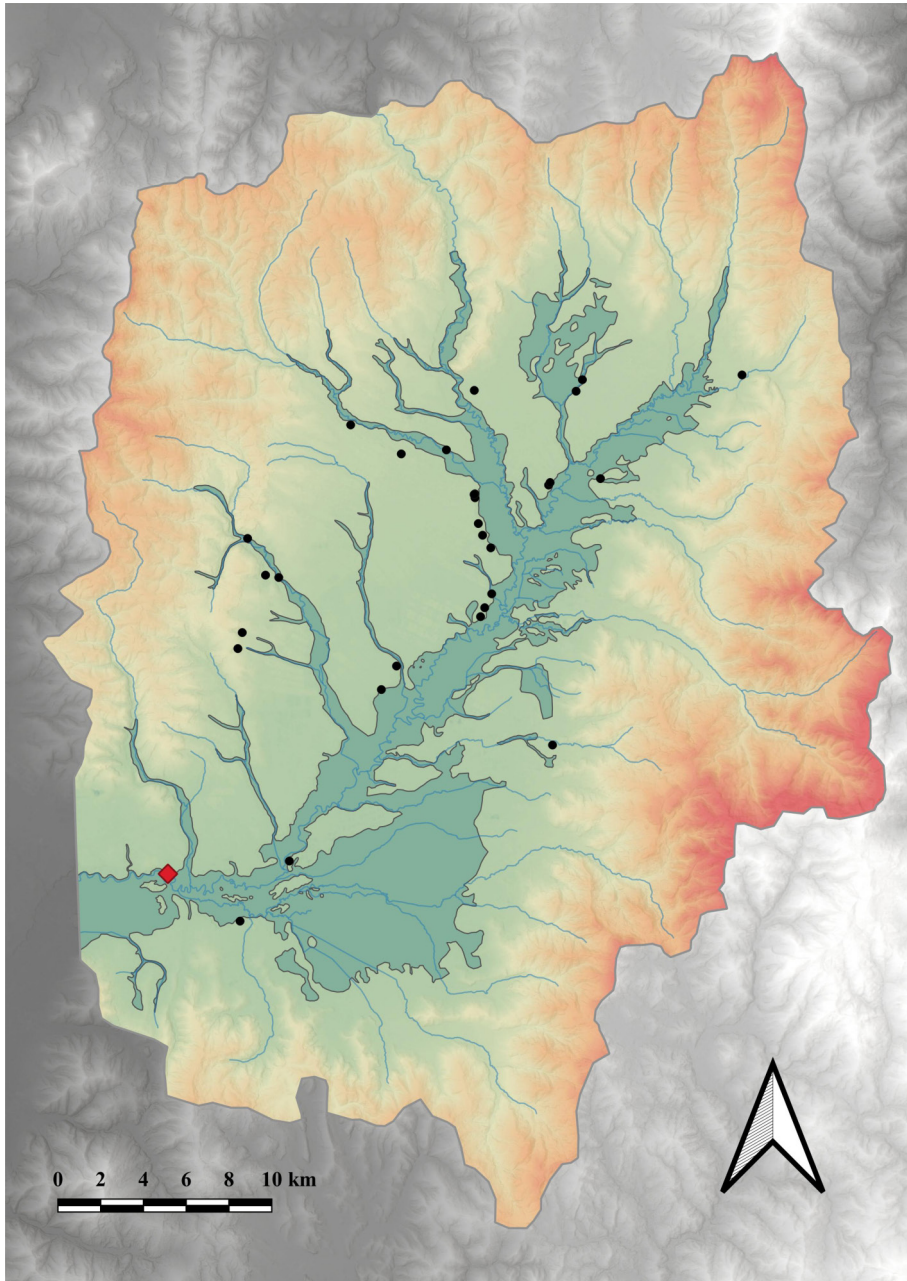
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⁵ The isotopic analysis of finds from the G27 feature (Crişan, Lăzărescu 2010) is forthcoming. Information was kindly supplied by Vlad-Andrei Lăzărescu.

⁶ Körösfői 2024, 122; Major, Molnár 2024, 153-154.

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Pl. I. Distribution of the Sântana de Mureș-Černjachov-type discoveries in the Târgu Secuiesc Basin. The red diamond marks the location of the Recî-Telek site.

Pl. I. Răspândirea descoperirilor de tip Sântana de Mureș-Černjachov în Depresiunea Târgu Secuiesc. Rombul roșu marchează situl de la Recî-Telek.