

## SALT TRADE AND WARFARE IN EARLY MEDIEVAL TRANSYLVANIA

ALEXANDRU MADGEARU

For the medieval man, salt was a strategic resource as important as iron and gold. Control over salt resources and trade was an important aspect of medieval politics and warfare, particularly in the case of nomadic horsemen. It may explain, for example, the conquest of Transylvania by the Magyars in the early 10<sup>th</sup> century, as well as the conflict between King Stephen of Hungary and Duke Achum of Banat in the early 11<sup>th</sup> century. The latter was started because Achum took control over the salt traffic on the Mureș valley (*SRH I – Gesta Hungarorum*, c. 25; II 489 – *Vita Sancti Gerardi*, c. 10). True or false, these assertions recorded by the medieval Hungarian sources reveal the place of the salt in the early medieval warfare and economy.

Transylvania has the richest salt resources in Central Europe. Its salt mines were exploited at least since the Roman times (*Kovach 1980*, 193; *Măluțan 1984*, 294-250)<sup>1</sup>. The most important are: Sic, Turda, Cojocna, Ocna Dejului (Cluj County), Uioara-Ocna Mureșului, Ocnișoara (Alba County), Ocna Sibiului (Sibiu County), Praid, Ocland, Ocna (Harghita County), Ocnița (Bistrița-Năsăud County)<sup>2</sup>.

The medieval sources are attesting two major roads used for salt traffic during the 11<sup>th</sup>–14<sup>th</sup> centuries. The most important was on the Mureș valley. The salt was transported with small boats or rafts toward Tisza and next toward the Danube. Slankamen at the mouth of Tisza was an important trade center. The second road followed the Someș valley through the Porțile Meseșului pass and it was supplied with the salt extracted in the northern mines. A royal salt storehouse was set at Sălacea, on the way to the Hungarian Plain (*Kovach 1980*, 193-198; *Iambor 1982*, 75-85; *Măluțan 1984*, 249-255; *Spinei 1990*, 144).

It has already been observed that the Avar and early Hungarian cemeteries in Transylvania were usually discovered close to salt mines (fig. 1) (*Rusu 1975*, 145; *Spinei 1990*, 145). I believe this is not just a coincidence. Moreover, some of the

---

<sup>1</sup> The Roman civilian settlements from Turda (*Potaissa*), Sic, Cojocna, Ocna Mureșului (*Salinae*), Ocna Sibiului evolved in relation with the salt production.

<sup>2</sup> See a map of all the Transylvanian salt resources in *Rusu 1975*, 146, fig. 4.

Avar and early Hungarian cemeteries are located in the same places (Gâmbaş and Lopadea Nouă). The map distribution of these findings suggests that both Avars and Hungarians had the salt mines area as a main target in their conquest.

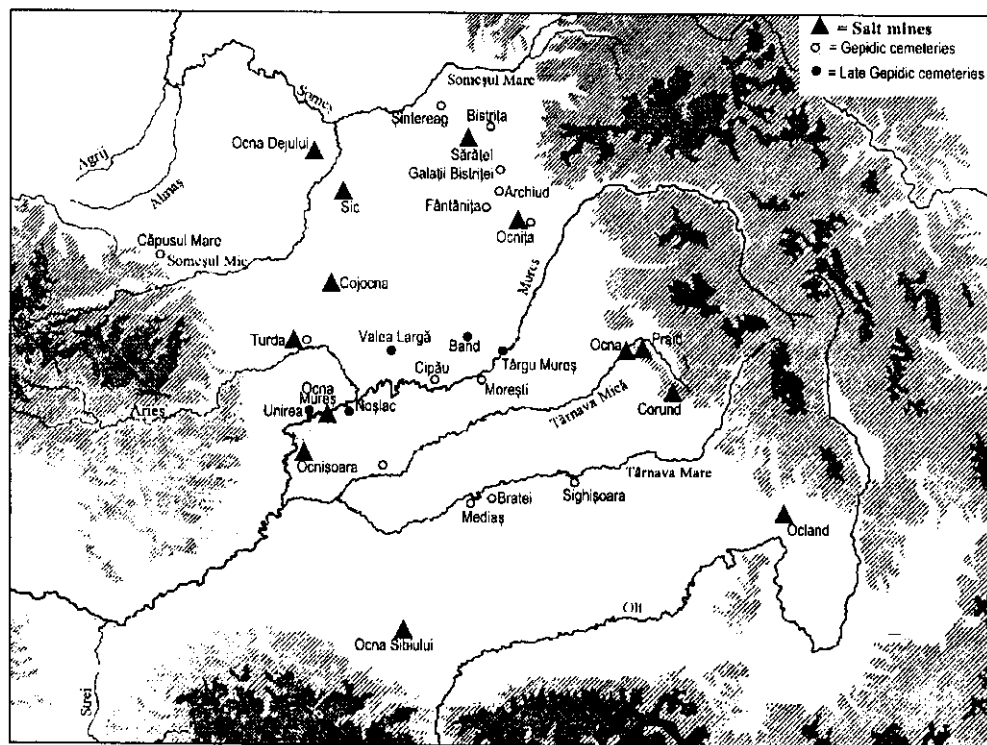


Figure 1. The Avar and the Early Hungarian cemeteries.

We should observe that the Avars did not conquer this area from the very beginning. The Transylvanian Gepids were the former masters of the salt mines, since the late 5<sup>th</sup> century. Even defeated by the Avars in 567, they preserved the control until 630 (*Horedt 1975*, 119-120; *Horedt 1986*, 29-36, 66-72; *Pohl 1988*, 230). If we put on the map the Gepidic cemeteries, we could remark the same concentration near several salt mines (fig. 2).

The Avars established a power centre around Aiud. From that point they were able to control the Mureș valley and also the access to the Someș valley. Both rivers connected the salt mines area with Pannonia. The Hungarians acted in the same way in the 10<sup>th</sup> century. They conquered two strategic points with similar function: Cluj and Alba Iulia. In these places were found two of the earliest Hungarian testimonies (*Horedt 1986*, 76-87; *Bóna 1990*, 127-136; *Heitel 1995*, 411-427). Transylvania represented a distinct territory, separated from the main Avar power centre located between the Tisza and the Danube. The same distinction could be remarked during the 10<sup>th</sup> century, when the Hungarian tribe settled in Transylvania remained independent from the main power centre



masters. The involvement of the Slavs in the salt extraction and trade is attested by several Romanian words and placenames of Slavic origin related to this matter (*ocnă, Slănic, Slatina*).

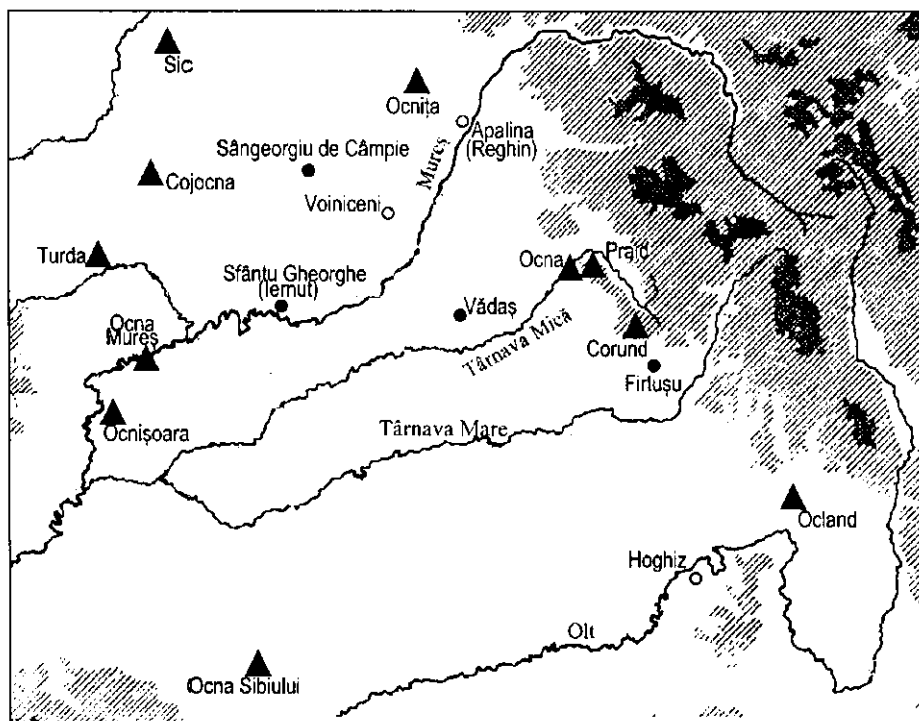


Figure 3. Gold coins:

**Hoards:** 1- Firtușu, Harghita County; around 300 pieces; closed with a solidus from 613-629 (*Butnariu* 1986, 231); 2- Sângeorgiu de Câmpie, Mureș County; hoard (?); a solidus from 527-565 together with another one from 457-474 (*Butnariu* 1986, 222; *Lazăr* 1994, 72); 3- Sfântu Gheorghe-Iernut, Mureș County; hoard (?); two solidi from 527-565 and 602-610 (*Lazăr* 1994, 72); 4- Vădaș, Mureș County hoard composed from 52 AR (Roman dinars) and 6 AV, closed with a solidus from 641 (*Butnariu* 1986, 231; *Lazăr* 1994, 72);

**Stray finds:** 5- Apalina-Reghin, Mureș County; a solidus from 527-538 (lost) (*Butnariu* 1986, 217; *Lazăr* 1994, 72); 6- Hoghiz, Brașov County, a solidus from 582-602 (*Butnariu* 1986, 220); 7- Șomeșu Mare, Maramureș County; a solidus from 555-565 (*Butnariu* 1986, 223); 8- Veșel, Hunedoara County; a solidus from 527-565 (*Butnariu* 1986, 224); 9- Voiniceni, Mureș County; a solidus from 602-610 (*Butnariu* 1986, 222; *Lazăr* 1994, 73); 10-, 11- Mureș County, passim; a solidus from 545-565 (*Butnariu* 1986, 224; *Lazăr* 1994, 72).

The existence of the Slavic population in early medieval Transylvania is certain. As for Romanians, it should be noted that one of the surviving kernel-zones during the migrations period was located in the Apuseni Mountains, west of the Mureș valley. There is no doubt in this respect, because the proofs are based on the data collected in the Romanian Linguistic Atlas (researches carried by S. Pușcariu, E. Petrovici, E. Gamillscheg, and especially G. Reichenkron) (*Reichenkron* 1963, 61-77).

It is very difficult to distinguish what was Slavic and what was Romanian, on the sole basis of the archaeological finds. Archaeology can help only in defining some cultural groups which were not of nomadic origin (Avars or Hungarians).

The first group (named Mediaș) consists of cremation and biritual cemeteries dated during the 7<sup>th</sup>-9<sup>th</sup> centuries (fig. 4). The people buried in the Mediaș type cemeteries were Slavs, but a coexistence with Romanic / Romanian elements could be supposed (Rusu 1973, 196-197; Horedt 1986, 60-66; Anghel, Ciugudean 1995, 56, 100, 193, 196; Anghel 1997, 270). Some of these cemeteries are located close to salt mines. For instance, the cemetery of Ocna Sibiului, which consists of 135 graves (120 cremations and 15 inhumations). The sacrifice of the widow and the east europoid anthropological type are showing the Slavic origin of those buried according to both rituals. They seem to have been workers in the salt mine of Ocna Sibiului during the Avar domination (the cemetery is dated in the 8<sup>th</sup> century and the beginning of the next) (Nicolăescu-Plopșor, Wolski 1975, 165-248).

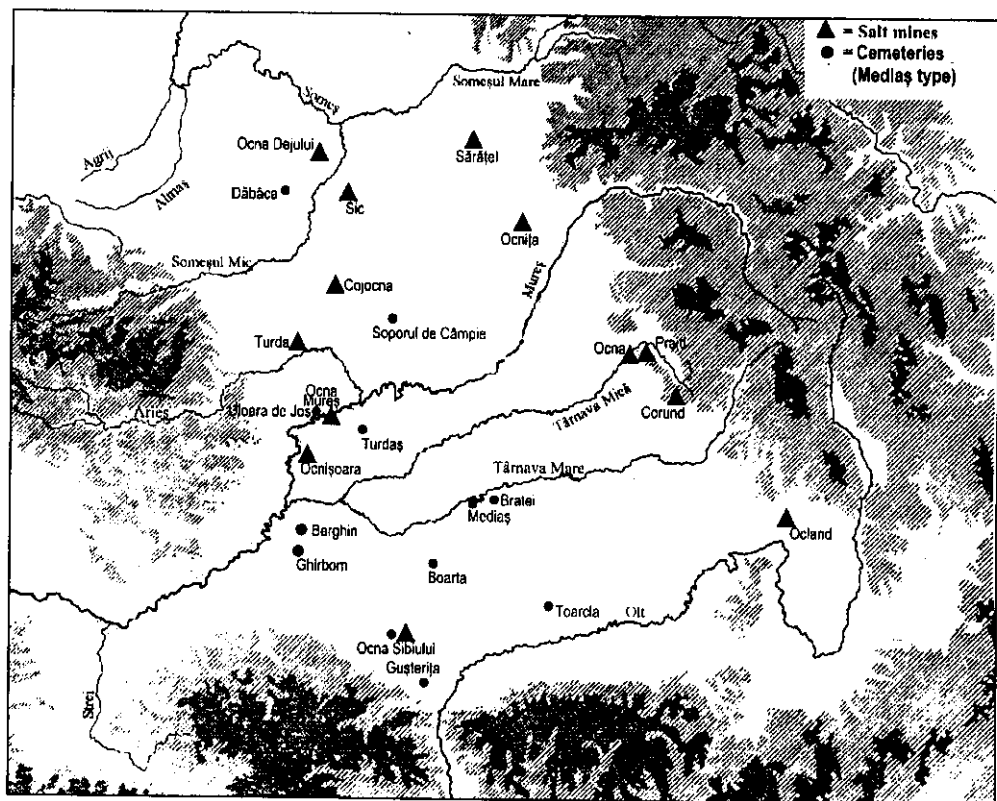


Figure 4. The Mediaș group.

Another cultural group is defined by the use of the pottery made with the fast wheel, found in settlements dated to the same period (7<sup>th</sup>-9<sup>th</sup> centuries). It seems that a population of Roman origin preserved this better technique in Transylvania. This kind of pottery is known in settlements like Albești, Țaga, Popeni-Cuceu,

Iernut, Suceagu, Eliseni, Simonești, Comana de Jos (*Székely 1988*, 171-178, 183-188; *Stanciu, Matei 1994*, 142-146; *Bărbulescu 1994*, 183; *Stanciu 2000*, 127-191).

A special category of objects is represented by the 8<sup>th</sup> century spurs discovered in the settlements of Șura Mică and Medișoru Mare (*Nägler, Rill 1981*, 46; *Székely 1988*, 171; *Madgearu 1994*, 155; *Pinter 1998*, 151). Both sites are located near two salt mines (Ocna Sibiului and Praid). The spurs were artifacts of exclusively military use. They are showing a military organization of a population that was not of Avar origin. It is known that the Avars did not use spurs. If we take into account the chronology and the context of the spurs found in Transylvania, than we should suppose the existence of a cavalry composed by Slavic and perhaps Romance fighters subjected to the Avar qagan (*Madgearu 1994*, 156-157). It is known that the Avar qaganate was composed from groups of various origins, including Slavs. It seems more likely that Transylvania was ruled with the help of the local chieftains of Slavic origin. A cooperation between Avars and Slavs is attested in other cases. This domination included the control over the salt production and trade (*Rusu 1973*, 196).

We should observe that very few spurs dated during the 8<sup>th</sup>-9<sup>th</sup> centuries have been found in Bulgaria<sup>3</sup>. There are no spurs in contemporary iron hoards from Wallachia and Moldavia. They were specific for the western Slavs, who took them from their main spreading area, which was the western Germanic Europe. The spurs found in Transylvania show a western influence exerted through the Avar qaganate. We shall further see that the penetration of the western spurs continued during the 9<sup>th</sup> century in other circumstances.

This local military organization was subdued by Bulgaria in the 9<sup>th</sup> century. Bulgaria extended its control over the Transylvanian salt mines area through the Mureș valley, after the collapse of the Avar qaganate (*Horedt 1986*, 75-76, 185; *Pohl 1988*, 327; *Bóna 1990*, 102-106). During the first three decades of the 9<sup>th</sup> century, the Middle Danubian area was disputed between Bulgaria and the Frankish Empire. Bulgaria kept the regions eastwards from Tisza after the peace of 832, including the present-day Banat. These northwestern territories acquired a status similar to the Frankish Marks, as like as the other peripheral Bulgarian province located in Wallachia. The domination most probably meant a tribute paid by the local rulers (*Brezeanu 1984*, 122-125, 129-130; *Pohl 1988*, 320-322, 327; *Bóna 1990*, 102-103; *Bálint 1991*, 100-101; *Madgearu 1998*, 192-197). These Bulgarian "Marks" enjoyed of a kind of autonomy. This results from the relations about the prisoners taken from Adrianople in 813 and transferred across the Danube into Wallachia. In 839, with some Byzantine assistance and under their own appointed leaders, they were able to escape. Several building materials of Byzantine fashion indicate the area in which these prisoners were settled: near the confluence of the Danube with the rivers Argeș and Siret. Both areas are located between the Danube and the salt mines in northeastern Wallachia (Slănic, Telega). Therefore, it seems that one target of the Bulgarian expansion in Wallachia was the control over these salt mines. The fortress of Slon (Prahova County) may have defended the way between this area and Transylvania (*Greco 1950*, 226-228;

---

<sup>3</sup> In the settlements of Stărmen and Odărcei and in the common grave 80 from the cemetery of Kjuljevča. See *Madgearu 1994*, 153.

Comşa 1960, 401-402; Comşa 1982, 143-146; Brezeanu 1984, 121-128; Comşa 1987, 39-44; Teodor 1987, 9-15; Curta 1997, 250).

The Bulgarian domination in southern Transylvania is suggested by some significant discoveries made in two small areas of this region. A special group of settlements and cemeteries dated in the second half of the 9<sup>th</sup> century was identified around Alba Iulia. This group has good analogies in the Lower Danubian area. The fine gray polished pottery, (the so-called Dridu B type) was found in some cemeteries and settlements like Alba Iulia (Blăjan, Popa 1983, 375-380; Heitel 1983, 100-113; Horedt 1986, 75, 78; Moga, Ciugudean 1995, 37, 43; Heitel 1995, 407-408), Blandiana (Horedt 1951, 192-194; Aldea, Ciugudean 1981, 145-149; Horedt 1986, 75-76; Anghel, Ciugudean 1987, 179-196; Moga, Ciugudean 1995, 60; Heitel 1995, 407), Călnic (Heitel 1983, 104; Heitel 1995, 415; Moga, Ciugudean 1995, 80-81), Sânbenedic (Comşa 1960, 411; Bóna 1990, 103-104; Moga, Ciugudean 1995, 173), Sebeş (Horedt 1951, 202-203; Heitel 1983, 105; Horedt 1986, 75; Moga, Ciugudean 1995, 167). This type of pottery was also identified in southeastern Transylvania (Poian and Cernat, Covasna County) (Székely 1972, 127-128; Székely 1992, 271, 278, 290, 294) (fig. 5). All these finds have been interpreted as proofs for a Bulgarian domination in southern Transylvania (Comşa 1960, 408-415; Rusu 1973, 198; Horedt 1986, 75-76, 185; Bóna 1990, 102-106; Bálint 1991, 100).

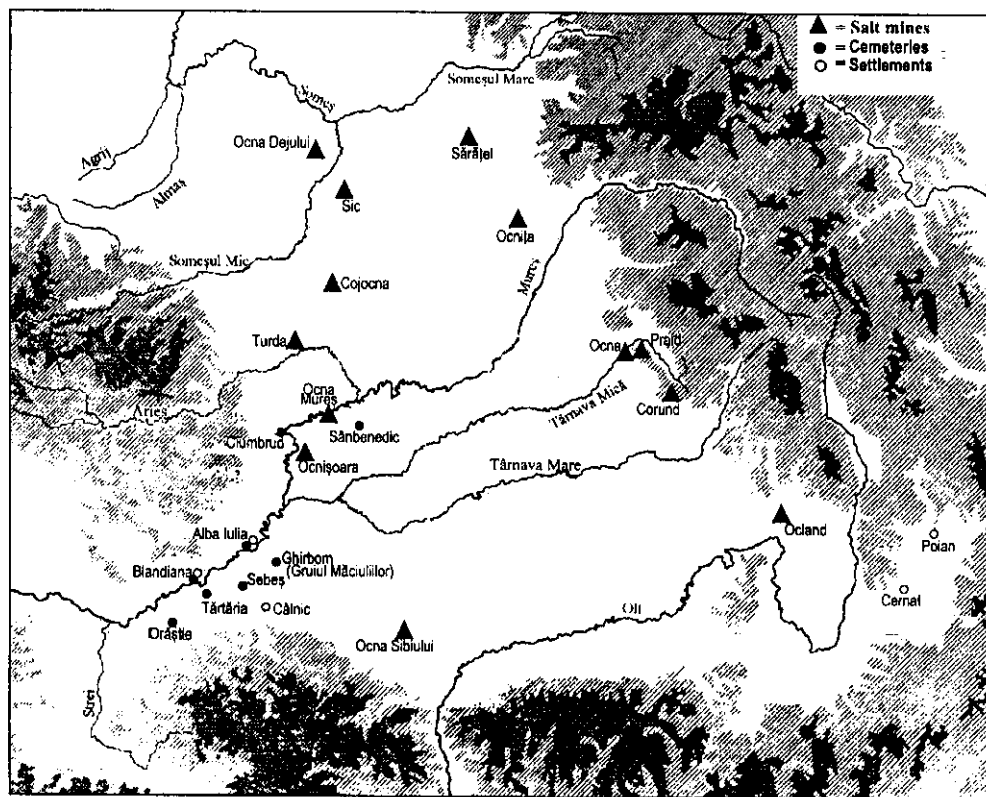


Figure 5. The Alba Iulia-Ciumbud group.

Alba Iulia was perhaps the centre of this territory subject to Bulgaria during the 9<sup>th</sup> century. The former Roman fortress was used again after the 9<sup>th</sup> century, as several findings are showing. A *rotonda* church was built perhaps in the same 9<sup>th</sup> century (Heitel 1983, 100-103; Heitel 1995, 407; Moga, Ciugudean 1995, 36-38, 43).

A cemetery found at Ciumbrud (Alba County) consists from 32 inhumation graves with W-E orientation (Dankanits, Ferenczi 1959, 605-615). Their inventory includes several earrings usually found in 9<sup>th</sup> century sites from Moravia (fig. 6).

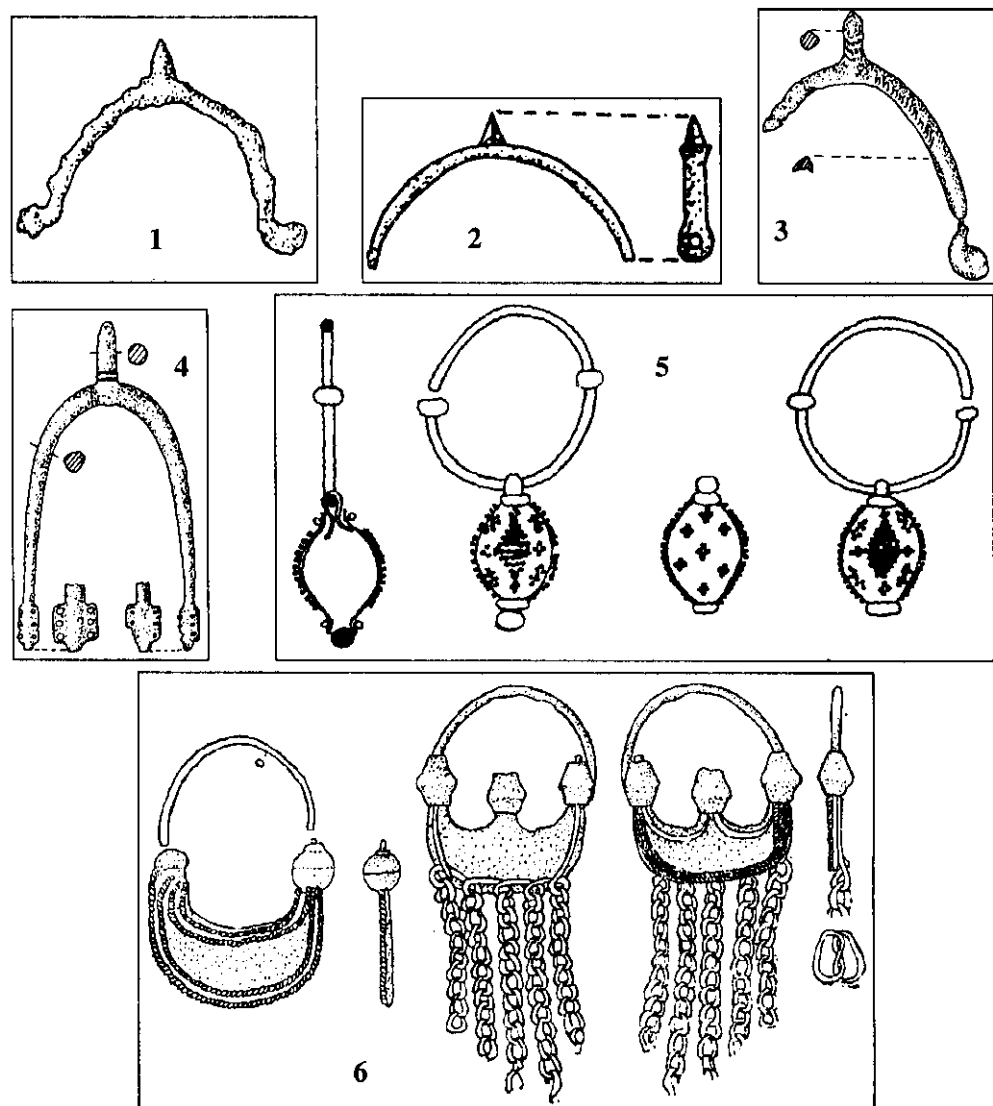


Figure 6. Objects: 1: spur (Medișoru Mare); 2: spur (Șura Mică); 3: spur (Breaza); 4: spur (Tărtăria); 5: earrings (Girbom-Gruul Fierului); 6: earrings (Ciumbrud).



Other scholars next accepted the idea expressed by the researchers who discovered the cemetery (Comşa 1960, 419; Macurek 1965, 54-55; Rusu 1973, 200; Heitel 1983, 106, 113; Horedt 1986, 78,80; Heitel 1995, 408, 427): they believed that these earrings are showing the Moravian origin of the people buried at Ciumbud. Therefore, they supposed that Moravia established here a kind of colony. In fact, these earrings are not exclusive Moravian, but of Byzantine fashion. Such pieces were found in the Lower Danubian cemeteries dated in the 9<sup>th</sup>-10<sup>th</sup> centuries (for instance, at Sultana). Moreover, the anthropological study of the skeletons shows a prevailment of the Mediterranean type – which does not match the profile of the Moravian population (Russu, Ferenczi 1959, 3-16). We agree I. Bóna (Bóna 1990, 104-106), who considers that the cemetery of Ciumbud belongs to the same group evolved under the Lower Danubian influence exerted in Transylvania during the 9<sup>th</sup> century. The inventory and the burial rites have close analogies in the cemeteries found at Alba Iulia (nr. II), Blandiana (A), Ghirbom-Gruicul Măciuliilor (Stoicovici, Blăjan 1982, 139-154; Moga, Ciugudean 1995, 100)<sup>4</sup>, Sebeş and Orăştie (Pinter 1998, 151, footnote 39; Pinter, Boroffka 1999, 313-330). This group which we prefer to name „Alba Iulia – Ciumbud” may be viewed as a prolongation of the Dridu culture. Although the Ciumbud cemetery has no fine gray pottery, I believe we can include it into the same group, because of earring types and funeral rites. The people buried in these cemeteries were most probably Christians.

An incident occurred in 892 speaks about the Bulgarian salt trade toward west. During the war against Sviatopluk, King Arnulf of Carinthia requested Bulgaria to stop the salt trade with Moravia (Grecu 1950, 229-230; Ratkoš 1968, 196-198; Teodor 1987, 4; Pinter 1998, 150). Therefore, the Transylvanian salt was exported toward Pannonia and Moravia. Several objects found in Transylvania and Banat show the contacts with the Frankish kingdom.

Two spurs of Frankish type were retrieved from a destroyed grave found at Tărtăria (Alba County). They belong to the type Ruttkay A 3 (the first half of the 9<sup>th</sup> century) (Horedt 1986, 74, 80, 185; Madgearu 1994, 154; Pinter 1998, 150). We should remark that the grave could be dated in the same time with the cemetery of Blandiana located just near Tărtăria. Another 9<sup>th</sup> century spur was found at Breaza (Braşov County), into a Dacian tower used as a refuge place in the early Middle Ages (Nägler 1969, 100-101; Madgearu 1994, 154). Four other spurs were found in the 10<sup>th</sup> century level of the Dăbâca hillfort (Cluj County) (Pascu, Rusu 1968, 177-178, fig. 4/6, 9, 5/4, 5). That level is dated after the first Hungarian inroad in Transylvania, occurred in the first half of the 10<sup>th</sup> century. This fact suggests that the Hungarian masters preserved into a certain extent the previously existing Romanian-Slavic military organization (a fact also suggested by *Gesta Hungarorum*). Three spurs of Frankish type were recently found in the settlement of Iernut (Mureş County), dated during the 8<sup>th</sup>-9<sup>th</sup> centuries. In the same settlement were also found other pieces of harness and weaponry.

A sword, a spear- and a lance-head were discovered somewhere around the present-day cities of Alba Iulia and Orăştie. All these 9<sup>th</sup> century weapons are of

<sup>4</sup> For the real chronology of this cemetery, see Heitel 1995, 410; Anghel 1997, 270.

Frankish origin. Z. Pinter believes they came from the grave found at Tărtăria (Pinter 1998, 145-150). This seems to be very likely. We do not agree his second idea, that the grave was Moravian. We saw that the cemetery of Ciumbrud does not support the presence of a Moravian enclave in Transylvania. It is more likely that the Tărtăria burial belonged to a local warrior from the area dominated by Bulgaria.

Relations with the Frankish kingdom continued until the end of the 9<sup>th</sup> century, as shown by finds of Köttlach-type earrings (Sălacea, Zalău, Deta and Tápé) (Bálint 1991, 192, 208, T. LIII/b/16, 218, 235, 258, T. LXI/b/7-8; Cosma 1994, 323-329; Madgearu 1994, 154). Except Deta, all the pieces were discovered along the salt roads, but outside Transylvania.

For the time being, such Frankish artifacts were not discovered in the Bulgarian sites south of the Danube. Their presence in and near Transylvania is significant for the close relations of this region with the Frankish world during the 9<sup>th</sup> century.

The significance of the Frankish denar from Orșova (minted in 855-875) (Kovács 1989, 51; Bálint 1991, 102, 245, 265; Madgearu 1994, 159) is not sure, because we do not know the circumstances in which this coin was found (the coin comes from a private collection and could be acquired from elsewhere). As concerns the Frankish coins from Jamu Mare, it has been shown they are in fact commemorative medals minted last in nineteenth-century France (Kovács 1989, 47, 169). They are not proofs for trading relations with the Frankish kingdom, as several historians believed!

The Bulgarian domination was not extended over the northwestern Transylvania. This allowed the rise of a free principality in the region of the Someșul Mic river, whose existence was recorded by *Gesta Hungarorum* at the beginning of the 10<sup>th</sup> century. The northern salt road passed by this principality. We can suppose that this local power centre was established by Romanians and Slavs with the purpose to take the control of the salt production and trade. The Hungarians conquered this principality sometime in the first half of the 10<sup>th</sup> century. As like as the Avars, the Hungarians established in Transylvania a distinct principality, which was later conquered by King Stephen I (Madgearu 2001, 117-205). A major target of the conquest was the mastership over the salt mines – as results from the information quoted at the beginning (Spinei 1990, 144).

The location of the earliest Hungarian findings suggests that Hungarians came from northwest, by the Porțile Meseșului pass. The finds from Alba Iulia and Blandiana could be explained by an offensive started from Cluj toward the middle course of the Mureș river.

In conclusion, Gepids, Avars, Bulgars and 10<sup>th</sup> century Hungarians were all interested in the rich Transylvanian salt mines. All established power centers outside this region, but they were compelled to extend here their domination because they needed salt for their cattle and for trade with the western regions. The conquerors settled here in small areas near the salt mines and not over the whole Transylvania. The contacts with the main power centers in Pannonia were established along the Mureș and Someș rivers. Bulgaria used also another way, by the passes across the southeastern Carpathian bend.

## BIBLIOGRAPHY

- Aldea, Ciugudean 1981 - I. Al. Aldea, H. Ciugudean, *Noi descoperiri feudal-timpurii la Blandiana (jud. Alba)*, in *Apulum*, 19, 1981, p. 145-149.
- Anghel 1997 - Gh. Anghel, *Necropola birituală prefeudală de la Ghirbom (Gruicul Fierului)*, in *Apulum*, 34, 1997, p. 255-271.
- Anghel, Ciugudean 1987 - Gh. Anghel, H. Ciugudean, *Cimitirul feudal timpuriu de la Blandiana (jud. Alba)*, in *Apulum*, 24, 1987, p. 179-196.
- Bálint 1991 - Cs. Bálint, *Südungarn im 10. Jahrhundert*, Budapest, 1981.
- Baltag 1994 - Gh. Baltag, *Asezarea de la Albești-Sighișoara. Elemente inedite în cultura materială din sec. IX-X*, in *Revista Bistriței*, 8, 1994, p. 75-78.
- Bărbulescu 1994 - M. Bărbulescu, *Potaissa. Studiu monografic*, Turda, 1994.
- Blăjan, Popa 1983 - M. Blăjan, Al. Popa, *Cercetările arheologice de la Alba Iulia – „Stația de salvare”*, in *Materiale*, 15, 1983, p. 375-380.
- Bóna 1990 - I. Bóna, *Völkerwanderung und Frühmittelalter (271-895)*, in *Kurze Geschichte Siebenbürgens*, Budapest, 1990, p. 62-106.
- Brezeanu 1984 - S. Brezeanu, *La Bulgarie d'au dela de l'Ister" à la lumière des sources écrites médiévales*, in *Études balkaniques*, Sofia, 20, 1984, 4, p. 121-135.
- Butnariu 1986 - V. M. Butnariu, *Răspândirea monedelor din secolele VI-VII în teritoriile carpați-dunărene*, in *BSNR*, 77-79 (1983-1985), 1986, p. 199-235.
- Comșa 1960 - M. Comșa, *Die bulgarische Herrschaft nördlich der Donau während des IX. und X. Jh. im Lichte der archäologischen Forschungen*, in *Dacia. N.S.*, 4, 1960, p. 395-422.
- Comșa 1982 - M. Comșa, *Contribuții arheologice privind existența unor cnezate și stabilirea unui drum comercial între Carpați și Dunăre în sec. IX-X*, in *Muzeul Național, București*, 6, 1982, p. 143-146.
- Comșa 1987 - M. Comșa, *Un drum care lega ținutul Vrancei de Dunăre și existența unui cnezat pe valea Putnei în secolele IX-X*, in *Vrancea. Studii și comunicări*, Focșani, 5-7, 1987, p. 39-44.
- Cosma 1994 - C. Cosma, *Morminte din secolele IX-X p. Ch. descoperite la Zalău (jud. Sălaj)*, in *EphemNap*, 4, 1994, p. 323-329.
- Curta 1997 - Fl. Curta, *Blacksmiths, Warriors and Tournaments of Value: Dating and Interpreting Early Medieval Hoards of Iron Implements in Eastern Europe*, in *EphemNap*, 7, 1997, p. 211-268.
- Dankanits, Ferenczi 1959 - A. Dankanits, I. Ferenczi, *Săpăturile arheologice de la Ciunbrud*, in *Materiale*, 6, 1959, p. 605-615.
- Diaconescu 1995 - Al. Diaconescu, *Lămpi romane târzii și paleobizantine din fosta provincie Dacia*, in *EphemNap*, 5, 1995, p. 255-299.
- Diaconu 1985 - P. Diaconu, *Extension du premier État bulgare au Nord du Danube (VIII<sup>e</sup>-X<sup>e</sup> siècles). La culture matérielle*, in *Études balkaniques*, Sofia, 21, 1985, 1, p. 107-113.
- Grecu 1950 - A. Grecu (= P. P. Panaitescu), *Bulgaria în nordul Dunării în veacurile al IX-X-lea*, in *Studii și cercetări de istorie medie*, București, 1, 1950, 1, p. 223-236.
- Heitel 1983 - R. Heitel, *Unele considerații privind civilizația din bazinul carpatic în cursul celei de-a doua jumătăți a secolului al IX-lea în lumina izvoarelor arheologice*, in *SCIVA*, 34, 1983, 2, p. 93-115.

- Heitel 1995 - R. Heitel, *Die Archäologie der ersten und zweiten Phase des Eindringens der Ungarn in das innerkarpatische Transilvanien*, in *Dacia*, N.S., 38-39, 1995, p. 389-439.
- Horedt 1951 - K. Horedt, *Ceramica slavă în Transilvania*, în *SCIV*, 2, 1951, 2, p. 189-218.
- Horedt 1975 - K. Horedt, *The Gepidae, the Avars and the Romanic Population in Transylvania*, in *Relations between the Autochthonous Population and the Migratory Populations on the Territory of Romania*, București, 1975, p. 111-121.
- Horedt 1986 - K. Horedt, *Siebenbürgen im Frühmittelalter*, Bonn, 1986.
- Iambor 1982 - P. Iambor, *Drumuri și vămi ale sării din Transilvania în perioada feudalismului timpuriu*, in *ActaMN*, 19, 1982, p. 75-85.
- Kovach 1980 - G. Kovach, *Date cu privire la transportul sării pe Mureș (sec. X-XIII)*, in *Ziridava*, 12, 1980, p. 193-200.
- Kovács 1989 - L. Kovács, *Münzen aus der ungarischen Landnahmezeit. Archäologische Untersuchung der arabischen, byzantinischen, westeuropäischen und römischen Münzen aus der Karpatenbecken des 10. Jahrhundert*, Budapest, 1989.
- Lazăr 1994 - V. Lazăr, *Autohtoni și alogeni în spațiul județului Mureș în perioada prefeudală*, in *Revista Bistriței*, Bistrița, 8, 1994, p. 55-74.
- Macurek 1965 - J. Macurek, *La mission byzantine en Moravie au cours des années 863-885 et la portée de son héritage dans l'histoire de nos pays et de l'Europe*, in *Magna Moravia. Commentationes ad memoriam missionis byzantinae...*, Praga, 1965, p. 17-70.
- Madgearu 1994 - Al. Madgearu, *Pinteni datați în secolele VIII-IX descoperiți în jumătatea de sud a Transilvaniei*, in *Mousaios*, Buzău, 4, 1994, 1, p. 153-163.
- Madgearu 1998 - Al. Madgearu, *Geneză și evoluția voievodatului bănățean din secolul al X-lea*, in *Studii și materiale de istorie medie*, București, 16, 1998, p. 191-207.
- Madgearu 2001 - Al. Madgearu, *Românii în opera Notarului Anonim*, Cluj-Napoca (Centrul de Studii Transilvane, Bibliotheca Rerum Transsilvaniae XXVII), 2001.
- Măluțan 1984 - C. Măluțan, *Drumurile sării în nord-vestul Transilvaniei medievale*, in *ActaMP*, 8, 1984, p. 249-255.
- Moga, Ciugudean 1995 - V. Moga, H. Ciugudean, *Repertoriul arheologic al județului Alba*, Bibliotheca Musei Apulensis II, Alba Iulia, 1995.
- Nägler 1969 - Th. Nägler, *Cercetările din cetatea de la Breaza (Făgăraș)*, in *StComSibiu*, 14, 1969, p. 89-121.
- Nägler, Rill 1981 - Th. Nägler, M. Rill, *Șantierul arheologic Șura Mică (jud. Sibiu). Raport preliminar (1976-1978)*, in *StComSibiu*, 21, 1981, p. 45-47.
- Nicolăescu-Plopșor, Wolski 1975 - D. Nicolăescu-Plopșor, W. Wolski, *Elemente de demografie și ritual funerar la populațiile vechi din România*, București, 1975.
- Pascu, Rusu 1968 - Șt. Pascu, M. Rusu et alii, *Cetatea Dăbâca*, in *ActaMN*, 5, 1968, p. 153-198.
- Pinter 1998 - Z. Pinter, *Im Miereschthal entdeckte Bewaffnungsstücke und Teile militärischen Ausrüstung karolingischer Herkunft*, in *Arheologia medievală*, Reșița, 2, 1998, p. 145-153.
- Pinter, Boroffka 1999 - Z. Pinter, N. Boroffka, *Neue mittelalterliche Gräber der Ciumbrud Gruppe aus Broos / Orăștie, Fundstelle Böhmerberg / Dealul Pemilor X8, in Transsilvanica. Archäologische Untersuchungen zur älteren Geschichte des südöstlichen Mitteleuropa. Gedenkschrift für Kurt Horedt*, hrsg. von N. Boroffka, T. Soroceanu, Rahden, 1999, p. 313-330.

- Pohl 1988 - W. Pohl, *Die Awaren. Ein Steppenvolk in Mitteleuropa, 567–822 n. Chr.*, München, 1988.
- Protase et alii 2000 - D. Protase, M. Blăjan, D. Botezatu, S. Haimovici, *Șpălnaca*, in *Cronica cercetărilor arheologice din România. Campania 1999*, Deva, 2000, p. 104.
- Ratkoš 1968 - P. Ratkoš, *Die grossmährischen Slawen und die Altmagyaren*, in *Studijne Zvesti*, 16, 1968, p. 193-219.
- Reichenkron 1963 - G. Reichenkron, *Die Entstehung des Rumänentums nach den neuesten Forschungen*, in *Südost-Forschungen*, München, 22, 1963, p. 61-77.
- Russu, Ferenczi 1959 - I.G. Russu, I. Ferenczi, M. Șerban, N. Motioc, *Cimitirul de la Ciumbrod (sec. X)*, in *Articole și lucrări științifice IMF Cluj*, Cluj, 1959, p. 3-17.
- Rusu 1973 - M. Rusu, *Notes sur les relations culturelles entre les Slaves et la population romane de Transylvanie (VI–X<sup>e</sup> siècles)*, in *Les Slaves et le monde méditerranéen, VI–X<sup>e</sup> siècles* (Symposium international d'archéologie slave, Sofia, 23-29 avril 1970), Sofia, 1973, p. 189-201.
- Rusu 1975 - M. Rusu, *Avars, Slavs, Romanic Population in the 6<sup>th</sup>–8<sup>th</sup> Centuries*, in *Relations between the Autochthonous Population and the Migratory Populations on the Territory of Romania*, București, 1975, p. 123-153.
- Spinei 1990 - V. Spinei, *Migrația ungarilor în spațiul carpato-dunărean și contactele lor cu românii în secolele IX–X*, in *ArhMold*, 13, 1990, p. 103-148.
- SRH - *Scriptores Rerum Hungaricarum*, ed. E. Szentpétery, I-II, Budapest, 1937–1938.
- Stanciu 2000 - I. Stanciu, *Despre ceramica medievală timpurie de uz comun, lucrată la roata rapidă, în așezările de pe teritoriul României (secolele VIII–X)*, in *Arheologia Medievală*, Brăila, 3, 2000, p. 127-191.
- Stanciu, Matei 1994 - I. Stanciu, Al.V. Matei, *Sondajele din așezarea prefeudală de la Popeni-Cuceu, jud. Sălaj. Câteva observații cu privire la ceramica prefeudală din Transilvania*, in *ActaMP*, 18, 1994, p. 135-163.
- Stoicovici, Blăjan 1982 - E. Stoicovici, M. Blăjan, *Cercetările arheologice în cimitirul din secolul VIII e.n. de la Ghiborom-„Gruiul Măciuliilor” (jud. Alba)*, in *Apulum*, 20, 1982, p. 139-154.
- Székely 1972 - Z. Székely, *L'aspect de la culture matérielle des VIII<sup>e</sup>–X<sup>e</sup> siècles dans le Sud-Est de la Transylvanie*, in *Les questions fondamentales du peuplement du Bassin des Carpathes du VIII<sup>e</sup> au X<sup>e</sup> siècle* (Mitteilungen des Archaeologischen Instituts der Ungarische Akademie der Wissenschaften, Beiheft 1), Budapest, 1972, p. 125-128.
- Székely 1988 - Z. Székely, *Așezări din secolele VII–VIII în bazinul superior al Târnavei Mari*, in *SCIVA*, 39, 1988, 2, p. 169-198.
- Székely 1992 - Z. Székely, *Așezări din secolele VI–XI p. Ch. în bazinul Oltului Superior*, in *SCIVA*, 43, 1992, 3, p. 245-306.
- Teodor 1987 - D.Gh. Teodor, *Quelques aspects concernant les relations entre Roumains, Byzantins et Bulgares aux IX<sup>e</sup>–X<sup>e</sup> siècles n.e.*, in *Aliași*, 24, 1987, 2, p. 1-16.