

## SOME REMARKS CONCERNING THE EXPLOITATION AND TRADING OF SALT IN TRANSYLVANIA IN THE 11<sup>TH</sup>-13<sup>TH</sup> CENTURIES\*

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Probably one of the most spectacular examples of natural resources, which played an important role in human history, is the salt one finds in any kitchen. Salt is at the same time the most humble and the most precious of minerals. But, from a geographical point of view, salt is, as a natural resource, unevenly distributed. Due to its rarity, Homer calls salt "*the divine substance*", Plato considered that "*it was especially precious to the gods*" and during the Middle Ages it was called "*the White Gold*".

As early as Antiquity salt is mentioned as the principal ingredient in medical science, and it was used as such by ancient Egyptians, Greeks and Romans. During the Middle Ages Arabs used it in a number of "pharmaceutical" products. The famous *School of Salerno - Schola Medica Salernitana* - , which lived its glory days in the 10<sup>th</sup>-13<sup>th</sup> centuries, was the first university medical institution that unified and used treatments developed by the Greeks, Romans, Jews and Arabs, including the ones based on salt<sup>1</sup>.

At the present moment one can gather a small library on the uses of salt. In the present paper we would like to present some aspects regarding the exploitation of salt and its trading routes in 11<sup>th</sup>-13<sup>th</sup> centuries Transylvania. If on mines, mining and ore exploitation techniques in general we have numerous documents and works from a very early date, on the salt mines in Transylvania and especially on the extraction method used in them documents start only much later, in the 14<sup>th</sup>-15<sup>th</sup> centuries. Thus we have to rely on the few written documents regarding the trading routes and the means of transport and, of course, on the hoards of coins discovered in Transylvania, the ones which can be dated to the 11<sup>th</sup>-13<sup>th</sup> centuries being especially important for our subject.

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Salt has always been one of the great riches of Transylvania – and by that we mean the historical Transylvania, comprising Banat and Maramureș –. Its exploitation has played a major role in Transylvanian economy. On both sides of the Carpathians there are 300 salt mines situated at the surface. Also, in the Romanian Carpathian area there are 2000 salt lakes, a unique situation in the whole Euro-Asian space. Pannonia, Illyria and the Balkans have no salt mines, the Carpathian area being, since history began, the only provider of salt for the populations that lived in these areas or passed through them. The most important salt mines in Transylvania are concentrated in the following areas – in Banat: in Caraș-Severin County: at Agadici (1), Brădișorul de Jos (2), Ciclova Română (3) and Topleț (4); in Transylvania – in Cluj County: at Cojoena (5), Ocna Dej (6), Sic (7) and Turda (8); in Sălaj County at Fizeș (9); in Alba County: at Ocna Mureș (10) and Zlatna (11); in Sibiu County at Ocna Sibiului (12); in Harghita County at Praid (13); in Bistrița-Năsăud County at Rodna (14); in Hunedoara County at Ruda-Brad (15); in Brașov County at Rupea (16); in the Mureș County at Sovata (17) and, finally, in Maramureș – in Maramureș County at Ocna Șugatag (18). The veins of these mines are usually 100-200m thick, but some of them reach up to 1000m – as the ones at Ocna Mureșului, Turda, Cojoena, Sic, Ocna Dejului, Sovata, Praid, or Ocna Sibiului. The salt mines at Dej in Cluj County, and at Praid in Harghita County, are the richest and the most impressive.

Salt extraction in these mines is archaeologically attested as early as Antiquity. One of the most important riches of the Roman province of Dacia was the salt mines, intensely exploited in the

\* Exploitation of salt in Transylvania in the 11<sup>th</sup>-13<sup>th</sup> centuries. The hoard from Sălcea, Bihor County.

<sup>1</sup> According to *Wikipedia, free encyclopedia*, [http://en.wikipedia.org/wiki/Schola\\_Medica\\_Salernitana](http://en.wikipedia.org/wiki/Schola_Medica_Salernitana)

Roman period. They were also turned to good account during the migrations period – the Goths, the Huns, the Gepidae, the Avars, as well as the Bulgarians “dug” the salt found in this area. For example, according to archaeological discoveries, the Avars that settled in Transylvania had as a main occupation the survey and control of the roads between the Mureş and the Târnavé Valleys, salt extraction and transport, as well as gold ore extraction and processing. Avar-related discoveries are usually concentrated around salt mines and gold ore processing sites: Aiud, Câmpia Turzii, Cicău, Felnac, Gâmbaş, Heria, Lopadea Nouă, Măgina, Sânpetru German, Stremţ, Şpălanca and Teiuş<sup>2</sup>. In the Middle Ages salt exploitation continued in the by then well-known salt mines. Salt transport took place either on rafts on the Rivers Mureş, Someş, Crişul Repede or Olt, or by carts on the roads leading from Transylvania to the Tisa Plain, and is mentioned in texts as early as the 9<sup>th</sup>-10<sup>th</sup> centuries.

From the *Chronicles from Fulda* we learn, for example, of the conflict between the Moravians and the Francs in 892, generated by the selling of salt from the Transylvanian mines. In 892-893 the salt mines in the area in question, as well as the sailing routes along the Rivers Mureş and Tisa, were controlled by the Bulgarians. In this context the Bulgarian Tzar Vladimir (889-893) was drawn in the Franco-Moravian conflict<sup>3</sup>, switching sides and finally supporting Arnulf of Carinthia. An embassy of King Arnulf went to Tzar Vladimir in 892 and asked him to stop granting salt sale rights to the Moravians. The salt in question came from the mines around Turda, was transported on the Mureş by rafts and then sold at Slankamen<sup>4</sup>. Archaeological excavations south of the River Mureş brought to light modest settlements of workers from the salt mines, dated to the end of the 9<sup>th</sup> century – beginning of the 10<sup>th</sup> century.

For the Magyars, who came at the end of the 9<sup>th</sup> century – beginning of the 10<sup>th</sup> century, salt was one of the most important riches that attracted them to Transylvania. Information about salt extraction and transport in the 10<sup>th</sup>-11<sup>th</sup> centuries is found in later chronicles - *Gesta Hungarorum*, *Vita Sancti Gerardi episcopi* and *Chronicon Pictum Vindobonense*. Thus, according to tradition, the spy Ogmad was sent by Tuhutum (Tétény) – one of the Magyar chieftains – over the mountains, to the East, to the country ruled by Duke Gelu. On his return he tells Tuhutum that “*that country’s gold is said to be very good, and that salt and salted substances are said to be extracted there*”. But in the North-West, for example, in order to obtain the longed-for white substance, they had to pass through the Gates of the Meseş River. According to archaeological discoveries, two fortresses guarded this area: Ortelec at the Western Gate – from Sylvania to Transylvania – and Moigrad. The frontier fortress of Moigrad acted, from the end of the 9<sup>th</sup> century on, as an important strategic military point that controlled all activity which took place through the Gates of the Meseş River. It also defended the second, Eastern Gate, that oversaw the traffic from Transylvania to Sylvania and was – according to contemporary documents – an important customs and stationing point on the “*Salt Road*”.

At the beginning of the 11<sup>th</sup> century the Magyar kingdom attacked and conquered the Bihor area and historical Transylvania up to Alba-Iulia – “*ad Albam Transylvaniam municiones civitatum*”<sup>5</sup>. The reasons for this expansion were mainly economic: the gold and salt that were found in this region. On this occasion the fortresses at Dăbâca and Moldoveneşti were destroyed. The Moldoveneşti fortress – an important strategic point – had a direct relation to salt exploitation in the mines at Turda, as it dominated and closed the access to the gold-extraction area in the Arieş Valley. The control of the exploitation, transport and trade of the salt passed to the King as one of the royal privileges.

<sup>2</sup> Ana-Maria Velter, *Transylvania în secolele V-XII*, Bucureşti, 2002, p. 41; see also *Repertoriul arheologic*, no. II, XI.VII, LVI, CXI, CXXI, CXXXVI, CLXII, CLXIX, CCL, CCLXVIII, CCLXXXV, CCXCII..

<sup>3</sup> *Annales Fuldenses*, p. 408, apud A. Decei, *Români din veacul al IX-lea până în al XIII-lea în lumina izvoarelor armeneste*, Bucureşti, 1939, p. 55.

<sup>4</sup> G. Pauler, *A magyar nemzet története 1301-ig*, Budapest, 1894, p. 508; idem, *A magyarok története Szent Istvánig*, Budapest, 1900, p. 147p. 147.

<sup>5</sup> Anonymus, *Gesta Hungarorum*, in *Fontes*, tome I, Ed. G. Popa - Lisseanu, Bucureşti, 1934, p. 44; *Chronicon Pictum Vindobonense*, in *Fontes*, tome XI, Ed. G. Popa - Lisseanu, Bucureşti, 1937, p. 32.

In the same period a state ruled by Achtum existed in Banat. Its conflict with the Magyar King Stephen I started because Achtum charged custom duties in his ports on the Rivers Mureş and Tisa on the salt that was transported to the Magyar Kingdom: “*he extended his power over the royal salt that came down the River Mureş, posting in this river’s ports, down to the Tisa, customs officials and guards, and charged custom duties on everyone*”<sup>6</sup>. Cenad – the political, administrative as well as the spiritual center of Achtum’s country – also had a salt mine that brought substantial income.

The counties in Transylvania were organized precisely around the salt and metal mines. The first documents with official mentions of some of the main economic activities in Transylvania – e.g. salt extraction – are dated from 1075 onwards. First there is a document dated to the reign of Geza I (1074-1077), by which the King offered the income from the salt mines at Turda (on the Arieş River) to the St. Benedict Monastery, situated on the Gran Valley (present day Czech Republic)<sup>7</sup>.

During the reign of Ladislau I (1077-1095), as a result of the coherent administrative, economic and financial reforms initiated by the King, Transylvania became an active part in the kingdom’s economy. The first proofs of the merchandise-money relations – coins hoards – appear in this period. Along with a number of isolated discoveries, three coins hoards dated to the 11<sup>th</sup> century were discovered. They were discovered in Bihor County at Oradea – “Sântandrei”, in Cluj County at Frata and Turda, and all of them are dated to the end of the century. They are made up exclusively of coins minted in the second half of King Ladislau I’s reign, more precisely between 1085-1095. It is a known fact that in the second part of his reign King Ladislau I introduced a series of reforms aimed at revigorating the economy and encouraging trade. The three coins hoards discovered in Transylvania are made up of dinars of the types CNH-31 and CNH-32 (Oradea - “Sântandrei”), and CNH-33 (the Frata and Turda hoards). These types of dinar are part of the second group of coins from Ladislau I’s reign, and were minted as follows: CNH-31 between 1087-1088, CNH-32 between 1089-1090 and CNH-33 between 1091-1092<sup>8</sup>. The presence, in the above-mentioned hoards, of a single type of dinar, as well as of unfinished, hastily-cut pieces or coins minted only on one side (the hoard from Oradea - Sântandrei”) indicates that they came directly from the mint, as official wages. The exceptional state of conservation of the coins, as well as the fact that they were stored during the minting period of that specific coin-type, encourages us to suppose that the respective coins were never used. They were discovered in areas where salt was extracted and deposited, and are directly linked to salt and iron exploitation and trade. According to the documents, an Office of the Salt existed at Turda for all the mines that transported the salt on the River Mureş, and it had its customs office at Arieş.

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The development of the Transylvanian economy received an important impetus at the beginning of the 13<sup>th</sup> century, during Andrew II’s reign (1205-1235). The end of the 12<sup>th</sup> century and especially the beginning of the 13<sup>th</sup> century marks the point when the towns of the Austrian and German duchies and bishoprics became involved in active trade activities with the Principality of Serbia and the Magyar Kingdom. The development of trade between these regions was much facilitated by the matrimonial alliance between Andrew II and the Austrian house of Merania. After this event a prosperous large cattle trade flourished, the main market being Northern Italy. For Transylvania too, this period represented an impetus in salt exploitation and trade.

Unfortunately we have no exact information on the extraction technique used in the Transylvanian salt mines. We can gather only disparate information from different documents. “*The Agreement of Bereg*” (1233) proved itself to be a document of real importance in this field. According to this document, signed by Andrew II and the Papal legate, bishop Jacobus, all process concerning

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<sup>6</sup> *Vita Sancti Gerhardi Oudalrici episcopi*, in *Scriptores rerum Hungaricarum tempore ducum regumque stirpis Arpadianae gestarum*, II, Ed. E. Szentpétery, Budapest, 1938, p. 489.

<sup>7</sup> *DIR*, C, 11th-13th centuries/I, p. 1, doc. 1.

<sup>8</sup> G. Jeszenszky, “Szent László korabeli magyar éremlelet és tanulságai”, in *NK*, 38-39, 1940, pp. 33-34, 37.

salt – excavation, washing, transport, storing, selling, tax charges – were strictly reserved to Christian subjects: “...no unfaithful, Jews and Sarazines, that is Ismaelites, shall be put in charge of salt affairs... but only the faithful”<sup>9</sup>. We find very interesting paragraph “e” of point “6” in this document, regarding the prices put on salt. Thus, the King established that: for each pile of washed (refined) salt churches were to pay 8 marks, and the churches belonging to the order of St. John of Jerusalem, to the bishop of Kalocsa and to that of Bacs were to pay 10 marks. For a greater pile of refined salt the convent of Egres was to pay 26 marks, and the church at Arad 25 marks. For unrefined salt, brought directly from the mine, one mark was to be paid for 100 lumps of salt; the St. Gotthárd Monastery was to receive 1 mark from the King to buy 80 lumps of salt<sup>10</sup>. One can easily notice that the prices were preferential. But the most important aspect of this text is the mention of the different categories of salt – refined and unrefined –, which gives at least some information of the salt processing technique that was used at that time in Transylvania.

Due to the scarcity of the information on salt processing techniques in that period we have resorted to analogies with neighboring regions, through a concise review of the methods used in obtaining salt.

Not all salt has the same quality. Salt obtained through the evaporation of brine – sea water, salt lake water or even molten surface salt – did not have a superior quality. But initially, in most regions of the world, salt was obtained through the evaporation of different types of brine. About this technique we have information in Russian texts. Thus, in the “*Miscellaneous of Sviatoslav*” – “*Izbornik Svyatoslava*” –, written in 1073, we find the first mentions referring to salt extraction on the northern shores, from sea water. The text is a philosophical-didactic work, written down on paper in Bulgaria, for Tzar Simeon and transcribed in Kiev for Prince Svyatoslav Yaroslavitch<sup>11</sup> by the monks from the Pechorskaja Lavra Monastery<sup>12</sup>. The document describes the salt factories equipped with *chrens*. These were small, riveted metal trays, and at that moment represented cutting-edge technology in this field of activity<sup>13</sup>. In Russia they remained in use until the 1970’s. In Poland, the earliest document to mention salt mines is the privilege awarded by Duke Kasimir I the Restorer (c.1039-1058) to the salt mine at Wieliczka<sup>14</sup> – “*Magnum Sal alias Wieliczka*” – a document dated to 1044. Located in Malopolska, this is one of the oldest and most spectacular of salt mines. It is 327m deep and more than 300km long. It still produces table salt nowadays. In Poland’s case too we do not know the precise date when extraction in the solid veins started. Initially salt was obtained in the same way – from brine. This was heated, resulting in the evaporation of water, which left only the salt in the trays. At a certain moment probably, during the probing of the mine at a greater depth, the salt deposit was discovered and extraction started by empirical methods, with primitive tools<sup>15</sup>. A document dated to 1124 shows that salt production doubled at “*Magnum Sal alias Wieliczka*”. One can relate this performance to the beginning of extraction of solid salt. Anyhow, in 1251 solid salt was surely extracted. According to the “*Yearbook of the Chapter of Krakow*” a salt mine was discovered that year at Bochnia, near Krakow – “*sal durum in Bochna est repertum, quod nunquam ante fuit*” – where extraction of the precious white substance got immediately under way<sup>16</sup>. Salt was extracted from a certain depth and was clean, pure and of superior quality.

With the high expenses needed for the developing salt exploitations, initially the King had to employ private contractors at the Salt Office in Krakow<sup>17</sup> – that is leaseholders. These covered all the expenses concerning the mine, including the risks implied by probing for new veins. But, as the salt

<sup>9</sup> G. Fejér, *Codex diplomaticus Hungariae civilis et ecclesiasticus*, Buda, 1829-1844, tome III/2, p. 319.

<sup>10</sup> *Ibidem*, p. 335.

<sup>11</sup> V. V. Kuskov, “Svyatoslav izbornik 1073 goda”, in *Drevnyaya Rus. Mir Nauki i Kul'tury*, 1, 2000, p. 3.

<sup>12</sup> I. Levochkin, “*The Svyatoslav Izbornik of 1073 - a Relic of Early Russian Culture*”, in *Izbornik Svyatoslava 1073 goda. Nauchny apparat faksimilnogo izdaniya*, Moscow, 1983, pp. 16-22

<sup>13</sup> E. V. Logunov, “*A history of salt production in Russia*”, in *Science Tribune*, January, 1997.

<sup>14</sup> “El Peligroso”, “*Salt Mine in Wieliczka*”, in *Skyscraper City Forums*, July 16th, 2004.

<sup>15</sup> *Ibidem*.

<sup>16</sup> “*The Salt Mine in Wieliczka*”, in *Malopolska Gateway*, [http://www.wrotamalopolski.pl/root\\_en\\_Visiting-card+of+Malopolska/Unique+Malopolska/UNESCO+Historic+Sites/The+Salt+Mine+in+Wieliczka/default.htm](http://www.wrotamalopolski.pl/root_en_Visiting-card+of+Malopolska/Unique+Malopolska/UNESCO+Historic+Sites/The+Salt+Mine+in+Wieliczka/default.htm)

<sup>17</sup> “El Peligroso”, “*Salt Mine in...op. cit.*”

mines were royal properties, they were under royal control and, as a result, all the extracted salt belonged to him. The King also invested in installations – thus guaranteeing their prolonged use – and appointed the *bachmistre* – the technical director of the salt mine.

On salt extraction in German territories we have information from “*Das Salzwerk zu Hall in Sachsen*” – “*Salt extraction at Hall, in Saxony*” – written by Friedrich Hondorff in 1670<sup>18</sup>. In Saxony the most important salt deposits were located at *Gutjahr* and *Deutscher Born*. In the 13<sup>th</sup> century, to be more exact in 1276, salt was extracted here from brine as well. It was then transported through large river beds to special houses – *Kothe*. The houses were named after different birds and animals, according to their size. In the 15<sup>th</sup> century 116 such *Kothe* existed on Saxon territories. The method employed was boiling the brine in special tubs that were heated by burning wood and straw. When the brine boiled, two “ingredients” were added – bovine blood and beer (malt). The blood, which turned into a sort of foam, helped purify the salt. The malt helped the salt to crystallize, as it became a sort of mud that gathered near the recipient’s walls. This “mud” was extracted from the tub with special shovels, similar to those employed for removing the snow. Afterwards, the salt was put in baskets to dry. This method was employed until 1797.

In the 11<sup>th</sup>-13<sup>th</sup> centuries, the salt mine at Halle was administered by the archbishop of Magdeburg, who was officially represented by a “*Burggraf*”, a count, a magistrate of the town. Because this magistrate only came to the mine three times per year, another magistrate was appointed at the mine – the “*Salzgraf*”, Count of the Salt – that took care of every day affairs<sup>19</sup>. The Count of the Salt controlled the town – he was at the same time administrator of the whole salt extraction area, as well as the judge of the Salt Mine Court. Among others, he also had the right to mint. The “*Salzgraf*” was initially appointed by the archbishop, and later by the King of Prussia.

As far as Transylvania is concerned, the documents inform us only that the salt that left the mines was under the form of “*boulders*” or “*water salt*”, and that it was either “*washed*” or “*raw*”. In other periods, when referring to salt, the sources mention that it was transported as “*salt boulders*”, or that certain rulers offered a certain number of “*salt boulders*” as gifts. These lumps of salt must have been the solid salt, the “*raw salt*” mentioned in the document written in 1233.

Regarding the “*water salt*”, we are sure that this was in fact salted water – that is brine. A document dated to Andrew II’s reign mentions that the church at Alba-Iulia was offered part of the salt customs at Vințul de Jos “...*on water salt that is taken down the Mureș on ships...*”<sup>20</sup>. In the case of “*washed salt*”, we presume that it referred to salt that was dissolved for purification. The washing of the salt, as well as its extraction from the brine, suppose the use of certain processes, certain tools and the existence of special buildings where the washing could take place. We are convinced that washing gullies and trays for the evaporation of water, as well as devices for the heating and evaporation of the brine were used in Transylvania too. We suppose that the salt obtained through these techniques was stored, as in other regions, in barrels.

Anyway, we can state that in mid 12<sup>th</sup> century Transylvania solid salt was extracted and traded. This situation is attested by a document dated to 1165, issued by Stephen III (1162-1172) – the King offered to the St. Margaret Monastery **one salt boulder** from each royal cart that passed through the Gate of the Meseș<sup>21</sup>. What we don’t know is whether the salt came from a surface mine, or from an underground exploitation.

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As salt exploitation was one of the royal rights, its extraction, transport and trade were thoroughly and rigorously regulated and organized. A whole road network – on water and on land – ensured the transport of the precious merchandise from the salt mines to the final destination. For its

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<sup>18</sup> R. Just, “*Halle: From one of the largest to smallest salt producers in Europe*”, in *Science Tribune*, September, 1997, <http://www.tribunes.com/tribune/sel/just.htm>.

<sup>19</sup> *Ibidem*.

<sup>20</sup> *DIR*, C, 11th-13th centuries/I, p. 289, doc. 242

<sup>21</sup> *DIR*, C, 11th-13th centuries/I, p. 4, doc. 8.

trade numerous towns received the right to organize fairs and storehouses, and customs offices were established in order to collect the tax on salt. The authorities included in the high price of salt especially the cost for its transport. On the “*salt roads*” in Transylvania, the white substance was taken to different settlements, as well as lay and ecclesiastic institutions. Thus, through the “*Diploma Andreanum*” in 1224, Andrew II established rights for the Germans that were settled in Transylvania – among others the right to exploit, transport and sell the salt<sup>22</sup>; in 1233 Andrew II, according to the “*Agreement of Bereg*”, gave the Praepositus and the Chapter of Arad 2000 salt boulders, the church in Oradea 2000 pails full of salt, the same amount to the one in Alba-Iulia and 5000 pails to the church in Cenad<sup>23</sup>.

The transport routes led to the West, North and East, all the neighboring areas being supplied with salt from the “Carpathian fortress”. From here, Carpathian salt reached the Magyar Kingdom, Moravia, Bohemia, the Principality of Kiev, but also the Balkans – the Byzantine Empire and the Principalities of Bulgaria and Serbia. Contemporary documents inform us that, in 1217, Andrew II offered to the clergy in Zagreb salt worth 50 marks, along with the right to transport and sell it free of charge<sup>24</sup>; in 1233, Andrew II swore under oath in front of the Papal envoy to make a series of gifts to the church – “*The Agreement of Bereg*”. Among others, he promised to offer salt from the Transylvanian mines – four centners to the knights of the Order of St. John of Jerusalem, 1000 pails full of salt to the church in Pernoch, the same amount to the church in Zerr and one load to the church in Kalocsa<sup>25</sup>; in 1247, King Bela IV (1235-1270) offered as a gift to the knights of the Order of St. John of Jerusalem – settled in the Country of Severin – the right to trade freely with fish from the Danube and salt from Transylvanian mines, for which they received free transport<sup>26</sup>. The merchandise was then taken from here and sent to the Byzantine Empire, the Principality of Bulgaria and to Walachia, as well as to the Adriatic port at Scardona<sup>27</sup>.

In 1183 salt was transported down the rivers – for example Transylvanian salt was taken down the Crișul Repede or the Someș (King Bela III provided three ships for these transports), and reached the church in Nitra (in present day Slovakia)<sup>28</sup>. These roads were used especially for the salt extracted at Cojocna, Turda or Ocna Dejului (Cluj County). All three exploitations were active starting with the Roman period and up to the Middle Ages. But the main and most used of salt routes was the River Mureș. The salt from the mines at Sovata (Mureș County), or at Praid (Harghita County), was taken by cart to the River Mureș and was loaded on rafts (“ships”). Sovata is located in the Praid-Sovata depression, along the upper part of the Târnava Mică River (where it meets the Sovata Stream), south-west of the Gurghiului Mountains, on a huge deposit of salt. One of the most spectacular natural elements present here is Lake Ursu, the most important salted and heliothermic lake in present day Romania. This settlement is attested since the Roman period, when salt was carried by cart to Apulum (Alba-Iulia). In this area coins hoards dated to the Roman period have been discovered. In the Middle Ages the settlement at Sovata is attested in texts only starting with 1597, in connection with the healing water that is found here. The beginnings of the salt mine at Praid are also placed in the Roman period. The sources mention four “amphitheater”-type surface excavations and discoveries include bricks stamped with “LVM” – the mark of *Legio V Macedonica*. The first written document bearing on the excavations at Praid is a letter from King Andrew III (1290-1301) dated to the year 1291<sup>29</sup>, concerning the royal rights on the salt mines. The document shows that at Praid the mine had functioned since approximately 1200 when, from an administrative point of view, it was subordinated to the Salt Office at Turda. Andrew II is the one who allowed the Saxons and Szeklers to get salt supplies from the mine at Praid, three times per year.

<sup>22</sup> I. Szentpétery, *Az Árpád-házi királyok okleveleinek kritikai jegyzéke (1272-ig)*, Budapest, 1943, no. 413.

<sup>23</sup> G. Fejér, *Codex diplomaticus Hungariae... op. cit.*, tome III/2, p. 319

<sup>24</sup> I. Szentpétery, *Az Árpád-házi...op. cit.*, no. 324.

<sup>25</sup> G. Fejér, *Codex diplomaticus Hungariae...op. cit.*, tome. III/2, p. 319.

<sup>26</sup> *Ibidem*, tome IV/1, p. 447.

<sup>27</sup> *Ibidem*.

<sup>28</sup> *DIR*, C, 11th-13th centuries/I, pp. 9-10, doc. 15.

<sup>29</sup> *DIR*, C, 11th-13th centuries/II, doc. 413.

The salt that was taken to the church in Alba-Iulia was also transported on the river; as we have already mentioned, this church also received – as a privilege offered by King Andrew II between 1205-1235 – part of the salt customs duties from the Vințul de Jos customs office: “...on the water salt that comes down the Mureș in ships...for a carina (big ship), the tax shall be half a mark, and for a medium-sized ship or a small one, one fertun”<sup>30</sup>. The ships that supplied St. Martin’s Monastery also followed the course of the River Mureș, and in 1211 they received from Andrew II the same rights as the ships supplying the monasteries Bistra and Arad - “...that is to be allowed to make three trips every year, going and returning, on the Mureș, without any obstacle, without having to pay any tax, and to be able to buy, by paying, the salt they need, from any salt mine they wish ...”<sup>31</sup>.

The importance of salt transport on the River Mureș is clear from a document written by Andrew II, dated to 1217, in which the King orders that, in case he was going to die in the Holy Land, Queen Jolanta, among others, was to receive the salt that was transported on the Mureș as part of the 8000 marks he owed her as an engagement gift<sup>32</sup>. The Teutonic knights that had settled in the Country of Bârsa obtained from Andrew II in 1222, besides other privileges, the right to possess 6 ships for carrying salt on the Rivers Olt and Mureș, as well as salt mines with their customs offices<sup>33</sup>. In 1230, Andrew II offered, among others, to Count Toma, son of Macarie, 6 ships for transporting salt on the River Mureș, along with the right to make three supply trips every year<sup>34</sup>. In 1233, the Hodoș Monastery received from the same King 1000 lumps of salt that were to be transported on the River Mureș.

From Uioara-Ocna Mureșului (Alba County), salt was taken by cart to Alba-Iulia. From here it was carried on “ships” on the River Mureș westwards, to the Pannonian plain. Once it reached the Magyar Kingdom, the salt could then be transported on water – on the River Tisa or on the Danube - or on land. It was then directed towards different market towns or towards monasteries that had received from the central authorities the right to receive salt from the Transylvanian mines. Thus, in 1138, salt came to the Dumis Monastery (in present day Hungary) on the River Mureș: “... the salt suppliers go back six times in the Transylvanian lands, returning with two ships to the market town at [Sâmbăteni]...”<sup>35</sup>.

In 1248, Bela IV offered the bishopric of Eger, in return for some part of the tithe, the exploitation of a salt mine at Dej, exempted from paying customs and transport (on land or water) charges<sup>36</sup>. A document dated to approximately 1200 mentions for the first time Dej as a river port and the most important traffic point for the salt trade. It was from here that the “ships”, loaded with the salt from Ocna Dejului, started down on the Someș River. As it passed the customs offices at Arieșul de Câmpie and Satu Mare, the salt reached the River Tisa. On this river it was transported down to Szeged, where an important storehouse was located in which salt that came on “ships” from all over Transylvania was gathered. Thus, in 1183, Bela III allowed the church in Nitra to store the salt that came “in ships on the Mureș, at Arad, or at Szeged”<sup>37</sup>; in 1217, Andrew II offers the clergymen in Zagreb salt “from the storehouse at Szeged”<sup>38</sup>. In 1222, through the “Golden Bull”, Andrew II established that the salt was to be stored “... only at Sălacea and Seghedin”<sup>39</sup>. The decisions of this document were reiterated by King Bela IV (1235-1270) in 1267 and Andrew III (1290-1301) in 1290, through an act strengthening the “Golden Bull”.

Through Sălaj passed, during the Middle Ages, some of the most important land roads linking the center of Transylvania to Central and Western Europe. Among these was the old trading route known as the “Salt Road” or the traders’ route. On this road passed the salt exploited in the

<sup>30</sup> DIR, C, 11th-13th centuries/I, p. 289, doc. 242.

<sup>31</sup> DIR, C, 11th-13th centuries/I, p. 152, doc. 79.

<sup>32</sup> G. Fejér, *Codex diplomaticus Hungariae...op. cit.*, tome III/1, p. 263; I. Szentpétery, *Az Árpádházi királyok...op. cit.*, no. 321.

<sup>33</sup> DIR, C, 11th-13th centuries/I, pp. 182-184, doc. 130.

<sup>34</sup> I. Szentpétery, *Az Árpádházi királyok...op. cit.*, no. 467.

<sup>35</sup> DIR, C, 11th-13th centuries/I, pp. 2-3, doc. 4.

<sup>36</sup> G. Fejér, *Codex diplomaticus Hungariae...op. cit.*, tome IV/2, p. 19.

<sup>37</sup> *Ibidem*, tome II, p. 202 and tome V/1, p. 289; I. Szentpétery, *Az Árpádházi királyok...op. cit.*, no. 136.

<sup>38</sup> I. Szentpétery, *Az Árpádházi királyok...op. cit.*, no. 324.

<sup>39</sup> DIR, C, 11th-13th centuries/I, p. 192, doc. 137.

mines at Cojocna and Turda (Cluj County) or at Ocna Dejului (Cluj County). The first mention of this road appears in a document dated to 1165, issued by Stephen III, through which the King offered the St. Margaret Monastery in Meseş one boulder of salt – or its money value – for each royal cart that passed through the Gate of the Meseş<sup>40</sup>.

One of the important salt mines in Transylvania was Ocna Sibiului (Sibiu County). Archaeological discoveries show that the area around the mine had been inhabited since the Middle Paleolithic due to the salt deposits that existed there. During Roman occupation a road was constructed, on which salt was transported by cart from Ocna Sibiului to Alba-Iulia, and from there to the heart of the Roman Empire. The route was still used until late in the Middle Ages. Thus a document dated to 1221 informs us that King Andrew II offered the Chapter from Strigonium the salt customs duties on the carts that passed through Vințul de Sus, near Alba-Iulia: “...each cart should give one salt boulder, that is two pails”<sup>41</sup>.

But the customs points on the “salt roads” are even older. The first mentions of such offices first appear in 12<sup>th</sup> century documents. The duties were collected either by the King, or by certain noble families, churches, monasteries and later even by some communes. In the same century western religious orders – Cistercians, Franciscans, Benedictines – established a series of monasteries that prospered on the rich local resources and due to the flourishing salt trade on the Mureş. The Praepositure of Arad, mentioned in documents in 1156, was one of the religious institutions that obtained substantial income from salt customs. The Bizere Benedictine Monastery, attested in documents in 1183 in the vicinity of Arad, was another old and important customs point on the “Salt Road” on the River Mureş. Here taxes were obtained from those who sailed their rafts down the Mureş westwards. Nowadays, on the spot where the Bizere Monastery once stood, the Frumuşeni archaeological site is located – in a village of the Fântânele commune, in the municipality of Arad, Arad County. Even though the church is mentioned in documents as early as 1183, as an institution belonging to the Benedictine monks, the actual building, recently discovered, is older, and can be dated to around 1100. The Bizere Monastery was initially of Byzantine rite, and was only later taken over by the Benedictines, to be destroyed in the 16<sup>th</sup> century by the Ottomans, and later by the Calvinists<sup>42</sup>.

Another important customs point was located at Vadu Crişului (Bihar County); it contains the present day villages of Borod, Şuncuiuşi and Dobreşti). Here was located the Market of the Salt Customs. The house of the “Zmaul” or “Salt Customs” is today a small stone building, located on the right shore of the Crişul Repede River, in the Vad pass. It is supposed that, in the 13<sup>th</sup> century, the salt customs that charged the rafts that floated towards the Magyar Kingdom were located here.

In the 13<sup>th</sup> century more and more market towns are mentioned in the documents, and more settlements received the right to organize fairs, thus entering a new category in the medieval economic and juridical hierarchy<sup>43</sup>. If at the end of the 12<sup>th</sup> century certain settlements obtained the right to hold more than one fair per year on Saturdays, starting with the 13<sup>th</sup> century the towns received the right to hold fairs in any day of the week<sup>44</sup>, which usually was an important saint’s day. Among the names of the Transylvanian settlements many have a relation with the day the fair took place – Miercurea Ciuc, Miercurea Nirajului, Miercurea Sibiului, Sâmbăta, Sâmbăteni, Sâmbăta de Sus, Sâmbăta de Jos, or names in connection with the market function of the town – Târgu Lăpuş, Târgu Mureş, Târgu Secuiesc, Târguşor. But such names are mentioned as such only later, in the 14<sup>th</sup>-15<sup>th</sup> centuries respectively.

<sup>40</sup> DIR, C, 11th-13th centuries/I, p. 4, doc. 8.

<sup>41</sup> DIR, C, 11th-13th centuries/I, p. 178, doc. 121.

<sup>42</sup> \*\*\*, *Descoperiri arheologice senzaționale în situl Fântâna Turcului. Mănăstirea Bizere*, (), in the *Ziua* newspaper, Bucureşti, Thursday, August 21<sup>st</sup>, 2003, p. 1.

<sup>43</sup> Şt. Pascu, *Voievodatul Transilvaniei*, tome II, Cluj-Napoca, 1979, p.136.

<sup>44</sup> P. Püspöki Nagy, in *Magyar Néprajz*, ch. “A Magyar vásárok Néprajza”, subch. „A Magyar vásárok története”, Budapest, 1988, p. 653.

The only market settlement attested at an earlier date is Sâmbăteni (Arad County) – *Sumbuth market*<sup>45</sup>. This is the oldest market town in Transylvania, attested by documents in 1138. Sibiu – *Villa Cibinum* – is mentioned also in the 12<sup>th</sup> century, in 1192. Medieval Sibiu underwent an exceptional development, due especially to the privileged status of the Saxon merchants settled here. Through the so-called “*Andreaneum*” – “*The Golden Bull of the Saxons*”, issued in 1224, Andrew II offered the German community in Sibiu customs charges exemption on the whole territory of the kingdom, the right to hold fairs free of charges, access to salt exploitations – “*to collect freely eight days for personal use, as well as on each of St. George’s (April 23), St. Stephen’s (September 2) and St. Martin’s (November 11) days*”, the right to mint their own coin, as well as the right to control the storehouses for the commerce with Walachia<sup>46</sup>. An important center for the exploitation and trading of salt was Ocna Turzii. In 1291 King Andrew III offered the local community the right to store and to organize weekly fairs, and to the salt cutters “*8 days to freely cut and trade*”<sup>47</sup>, for their work being paid “*4 weights of the dinars that circulate in the province for every 100 lumps of salt*”<sup>48</sup>. A royal dinar in Andrew III’s reign weighed 0.3452g of silver<sup>49</sup>; thus, 4 weights of dinars weighed 1.3808g of pure silver.

Surrounded by solid walls and watch towers, many of the market towns located strategically on important commercial routes received in the 12<sup>th</sup>-13<sup>th</sup> centuries the right to store salt. Usually the towns’ defense towers were also used as storehouses. One of the most important and utilized roads passed through North-Western Transylvania, across the territory of the nowadays Counties of Sălaj and Bihor. The salt that came by carts on this road from all over Transylvania was gathered in the Magyar Kingdom in the market town of Debrecen, which received the right to store it in the 12<sup>th</sup> century. In the 13<sup>th</sup> century there was another salt storehouse on this road, at Zalău (in the area around Sălaj) – the salt had to be “*transported on land from Zoloch (Zalău)*”<sup>50</sup>, and in the Bihor area a salt storehouse – one of the most important in Transylvania – was located at Sălacea. The importance of the settlement is shown by an entire series of documents issued by the royal chancellery, which refer to the “*storing of salt at Sălacea*”, to the “*income on the salt at Sălacea*” or to the gifts offered by the King from “*the salt income at Sălacea*”.

The earliest mention of the storage market town is dated to the end of the 11<sup>th</sup> century, in a document issued by King Coloman’s (1095-1116) chancellery. It informs us that the sovereign had confiscated the domains of the Berettyó Monastery (the nowadays communes of Abram, Balc, Ciuhoi, Chișlaz and Suplacul de Barcău in Bihor County), also denying it a series of privileges, among which the tax on the salt from *Sălacea*<sup>51</sup>. All these privileges were restituted by King Geza II (1141-1162). The market town’s importance grew in the 13<sup>th</sup> century in such a way that one of the provisions of the “*Golden Bull*”, issued by Andrew II in 1222, stressed that the salt was not to be stored “*inside the country, but only at Sălacea and Seghedin and in the frontier regions*” – where there were fortified towns that were able to guard the salt storehouses<sup>52</sup>.

The name *Sălacea* appears in 1217 in the document issued by the same king, who offered the following to the knights of the Order of St. John of Jerusalem: for taking care of the poor they received 500 silver marks “*from the income on salt from Sălacea*”<sup>53</sup>; for the maintenance of the Margot fortress they received 100 silver marks “*...from the income on salt of our kingdom, which will have to be paid to them during Easter at Sălacea*”<sup>54</sup>; those in the Crac fortress were to be “*paid each year 100 silver marks from the salt income from Sălacea*”<sup>55</sup>. Also, we learn from a document issued in 1232 that the

<sup>45</sup> DIR, C, 11th-13th centuries/I, pp. 2-3, doc. 4.

<sup>46</sup> I. Szentpétery, *Az Árpádházi királyok...op. cit.*, no. 413.

<sup>47</sup> DIR, C, 11th-13th centuries/II, doc. 413. Also see S. Goldenberg, “*Despre târgurile și bâlciurile din Transylvania în secolele XIV-XVII*”, in *Sub semnul lui Clio*, Cluj, 1974, pp. 206-212.

<sup>48</sup> O. Balázs, *Torda és környéke*, Buda, 1889, pp. 138-142.

<sup>49</sup> B. Homán, *Magyar pénztörténet, 1000-1325*, Buda, 1916, pp. 315-352.

<sup>50</sup> DIR, C, 11th-13th centuries/I, p. 263, doc. 220.

<sup>51</sup> \*\*\*, *Erdély rövid története*, B. Köpeczi (ed.), Budapest, 1992, ch. II, subch. I, pt. 3, p.143.

<sup>52</sup> DIR, C, 11th-13th centuries/I, p. 192, doc. 137.

<sup>53</sup> DIR, C, 11th-13th centuries/I, pp. 164-166, doc. 105.

<sup>54</sup> DIR, C, 11th-13th centuries/I, p. 166, doc. 106.

<sup>55</sup> DIR, C, 11th-13th centuries/I, p. 166, doc. 107.

salt workers at Sălacea had to pay every year to the Bakony Monastery (in present day Hungary) the sum established by Andrew II – 30 silver marks – from the salt income from Sălacea, which was to be “transported on land from Zoloch (Zalău)”<sup>56</sup>. The Pelis Monastery (present day Hungary), belonging to the Cistercian order, was also offered by Andrew II 100 silver marks every year, “... from the income on royal salt from Sălacea”, privilege that was strengthened by a document issued by Pope Gregory IX in 1236<sup>57</sup>.

In a later document, issued in 1238 by the chancellery of King Bela IV, the King lists and strengthens the rights awarded to the crusader knights. Among these are: 1000 marks worth of salt from Sălacea – “of Saloch” –, as well as the salt transportation three times per year in 6 ships on the River Mureş<sup>58</sup>.

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In the 13<sup>th</sup> century, as the salt mines were royal properties, their income administration as well as that of the salt customs offices were subordinated to royal authorities. During Andrew II's reign, according to royal orders, the salt that was bought and the salt customs charges had to be “paid in coins...and the coins that will be paid have to be good pieces of Friesach”<sup>59</sup>.

It is more than illustrative that the majority of the coins hoards that are made of Friesach-type pfennigs was discovered around the two main salt transportation routes: on the water routes on the inferior course of the River Mureş – at Cenad, Cuvin, Sebiş and Sâmbăteni (Arad County), at Teremia Mare and Tomnatic (Timiș County) –, and on the land route in North-Western Transylvania – at Nojorid, Sălacea, Sărmășag and Ștei (Bihor County), at Satu-Mare and Sudurău (Satu Mare County). Due to the existence of these commercial routes, the areas they passed through had a flourishing economy and a very active coin circulation. The Friesach dinars imposed themselves rapidly on the Transylvanian market, as it was preferred and demanded by the population to the detriment of the depreciated royal coin.

The rapid acceptance of these coins in Transylvania, besides the appreciation of their value, was also a result of the presence of the many German colonists that had settled here. These were already used to this type of coin from their homeland. The first colonists were brought to Transylvania during King Geza II's reign (1141-1162). “The guests” – most of them miners and craftsmen - settled mostly on higher grounds, with mining potential, or near salt mines, where they developed advanced crafts and trade. The newcomers, as well as their settlements, were from the beginning offered a series of privileges<sup>60</sup> that insured them the liberties necessary for an undisturbed economic life in the new territories. The measure was a profitable one for all the parties. In 1186, for example, Bela III (1172-1196) collected 15000 silver marks from the tax payers “*hospites regis de Ultrasylvas*”<sup>61</sup>. The renewal and extension of these privileges by Andrew II led to a remarkable development of salt and metal exploitation in that period, to the diversifying and flourishing of commerce. If in the 9<sup>th</sup>-11<sup>th</sup> centuries there existed in Transylvania an interdependent economy – even if a varied one –, as natural economy and barter prevailed, starting with the 13<sup>th</sup> century the economy became more and more open, and was based on the market demands. Commerce became in this period the economy's most dynamic sector, and salt transport and trade was front-ranking in Transylvanian commerce.

<sup>56</sup> DIR, C, 11th-13th centuries/I, p. 263, doc. 220.

<sup>57</sup> DIR, C, 11th-13th centuries/I, p. 292, doc. 246.

<sup>58</sup> G. Fejér, *Codex diplomaticus Hungariae...op. cit.*, tome IV/1. pp. 104-111.

<sup>59</sup> DIR, C, 11th-13th centuries/I, pp. 266-267, doc. 223.

<sup>60</sup> DIR, C, 11th-13th centuries/I, p. 290, doc. 244, p. 310, doc. 259, p. 328, doc. 283, pp. 334-335, doc. 289.

<sup>61</sup> K. Reinerth, *Die freie koenigliche St. Ladislaus-Propstei zu Hermannstadt und ihre Kapitel*, in “*Deutsche Forschungen im Suedosten*”, I, 1942, pp. 567-597. Also see K. Popa, “*Kreuzzuege als Quelle einer Ansiedlung in Siebenbuergen (On the Question of a Connection between the Crusades and the Colonization of the Transylvanian Saxons)*”, in *FVLk*, 32, 1989, 1, pp. 111-116; K. Gündisch, *Siebenbürgen und die Siebenbürger Sachsen*, München, 1998, pp. 131-132.