

Researches on Salt Archaeology and Salt History in Roman Dacia

Lucrețiu Mihailescu-BÎRLIBA¹

Abstract: *Even if the researches on salt exploitation and salt administration in Roman Dacia are scarce and the results are far from offering a coherent image on this economic activity, there are however some works which are important for this stage of our approach. These works are treating the aforementioned issues from historical, ethnographic and archaeological perspectives, both in synchronic and diachronic way. I shall briefly present the most important researches and their results.*

Rezumat: *Chiar dacă cercetările asupra exploatării sării și administrației salinelor în Dacia romană sunt puțin numeroase și rezultatele sunt departe de a oferi o imagine coerentă asupra acestor activități, există totuși câteva lucrări care pot constitui puncte de reper pentru stadiul actual al cercetării. Acestea tratează problemele menționate mai sus din perspective istorice, etnografice și arheologice, atât sincronice, cât și diacronice. Voi prezenta pe scurt cele mai importante rezultate ale acestor cercetări.*

Keywords: Roman Dacia, salt exploitation, historiography.

Even if the researches on salt exploitation and salt administration in Roman Dacia are scarce and the results are far from offering a coherent image on this economic activity, there are however some works which are important for this stage of our approach. These works are treating the aforementioned issues from historical, ethnographic and archaeological perspectives, both in synchronic and diachronic way. I shall briefly present the most important researches and their results.

The exploitation of salt in Roman Dacia has become the topic of more detailed studies during the last two decades. The absence of archaeological research, also caused by the fact that the traces of the old mines have not survived, as well as the precarious epigraphic evidence have resulted in a sparse literature on the economy of salt in this province. Nevertheless, older information on several exploitations first appears in the 17th–18th centuries by J. Fridwaldszky,² J. E. Fichtel,³ M. Ackner.⁴ A very interesting study treats the first map of salt exploitations, realized by Fichtel.⁵ D. Moscal analyzes the correspondence between the toponyms in the 18th

¹ „Alexandru Ioan Cuza” University of Iași: blucretiu@yahoo.com

² FRIDWALDSZKY 1767, 159.

³ FICHTEL 1780, 89.

⁴ ACKNER 1856, 23.

⁵ MOSCAL 2018, 1-11.

century and the actual placenames. The map of Fichteles includes the salt exploitations not only in Transylvania, but also in Moldavia and Wallachia. It remains an important source which documented the salt resources in the area. From our point of view, the map presents interest in locating the salt exploitations which provide continuity from ancient to modern times. It is worth to notice that the richest salt resources are coming from Transylvania, which corresponds generally with Roman Dacia.

The first monograph work on mining in Roman Dacia was published by V. Wollmann⁶, who identifies several salt exploitation centers (many surface ones) during the Roman era, on the basis of older evidence: Ocna Mureș, Turda, Cojocna, Sic, Pata, Ocna Dejului, Ocna Sibiului, Domnești, Rogna, Sânpaul, Mărtiniș, Ocnele Mari.⁷ However, Wollmann dedicates only ten pages of his monograph to the exploitation of salt. In what concerns the administration of the saltworks in Roman Dacia, Wollmann addresses only in passing the topic, mentioning the *conductores pasculi et salinarum* and three employees from this administration.⁸ Nonetheless, according to Wollmann a great quantity of salt was produced in Roman Dacia, which was even exported.⁹

An exhibition catalogue published at Sfântu Gheorghe mentions several salt exploitations of the La Tène era in Dacia, such as at Praid-Sânpaul or Cârloănești.¹⁰ The catalogue also presents a repertoire of the salt-spring wells from Eastern Transylvania.¹¹

In 2007, D. Benea dedicated two articles to the administration of the Dacian saltworks under the Romans, one more condensed, the other more extensive¹². Reiterating to a large extent the information from Wollmann, Benea details however several aspects concerning the salt mines administration. She finds that in the proximity of the main salt exploitation centers there are castra or fortifications housing military units¹³, but she fails to go into details for each of the exploitations – this approach would have been useful for revealing the importance placed by the Roman army and, implicitly, by the administration, on the exploitation of this resource. What should be stressed is the role of these troops in the wider Roman strategy in Dacia, not only from the economical point of view, but also military and political. In other words, these troops were *also* tasked with protecting the mining exploitations (not only the salt ones), but their main role was to defend the province, either along the *limes* or in the strategic areas from the military or commercial point of view (to wit, mountain passes, fords).

⁶ WOLLMANN 1996.

⁷ WOLLMANN 1996, 241-244.

⁸ WOLLMANN 1996, 248-249.

⁹ WOLLMANN 1996, 249.

¹⁰ HARDING ET ALII 2006, 56-74.

¹¹ CHIRICESCU 2006, 164-167.

¹² BENEA 2007A, 41-46; BENEA 2007B, 91-112.

¹³ BENEA 2007a, 42-43; BENEA 2007b, 102.

Benea presents rather briefly the *conductores salinarum* mentioned by the epigraphic sources from Dacia.¹⁴ The personnel of the administration is likewise presented in an abridged fashion.¹⁵ Starting from the text of an inscription from Pannonia Inferior, D. Benea claims that the three *conductores* attested in Dacia originate without exception from the *canabae* of Apulum¹⁶, despite the fact that two of the inscriptions date from the Severan era, when the urban structures of Apulum had already taken form. In Dacia, the leaseholders bear the title of *conductores pascui et salinarum*. The link between the exploitation of salt and the administration of the pastures owned by the Roman state is natural, with the supplying of salt for cattle (including for the army horses) being an important part of tending the livestock. D. Benea suggests that these *conductores* from Dacia here responsible, among others, with the selling of salt into the Barbaricum.¹⁷ We will discuss this hypothesis later on. In any case, for Benea the rigorous control on the exploitation of salt is instituted under Septimius Severus, on the backdrop by his incessant warring in the early years of his reign¹⁸. On this issue too I will return later. On the other hand, analyzing the salt administration in Roman Dacia, I. Tsigarida concludes that the state was in fact and *de jure* the real owner of the salt exploitation, the *conductores* being subordinated to *procuratores*.¹⁹ The conclusion is correct in my opinion, but we have to pay attention at what *salinae* signify in every particular case.

I have relatively recently attempted to assess the epigraphic dossier on the clerks working in the administration of the salt (slaves and freedmen), and concluded that their presence exactly in the area of the salt exploitations (in other words, their direct involvement on the field) reveals the importance placed by the Roman state on this exploitation.²⁰ Furthermore, in a new article I have detailed the role of the army in the area of a salt exploitation (Ocna Mureș–Salinae in particular and Dacia in general) in the context of no archaeological remains being found yet of a castrum or a military fortification.²¹

As stated, the archaeological information concerning the exploitation of salt in Dacia is rather scant. Recent investigations carried out by A. Harding and V. Kavruk have confirmed the existence of a salt spring at Mărtiniș (which definitely functioned in the Roman era).²² Geophysical surveys made by the same authors in the Sânpaul area led them to conclude that on the road to Ocna there was the Roman mining exploitation, though no investigations have

¹⁴ BENEA 2007a, 43-44; BENEA 2007b, 102-105.

¹⁵ BENEA 2007a, 44; BENEA 2007b, 105.

¹⁶ BENEA 2007a, 44; BENEA 2007b, 105.

¹⁷ BENEA 2007b, 107.

¹⁸ BENEA 2007b, 108.

¹⁹ TSGARIDA 2012, 320-321.

²⁰ MIHAILESCU-BÎRLIBA 2016, 51-58.

²¹ MIHAILESCU-BÎRLIBA 2018; MIHAILESCU-BÎRLIBA 2019a.

²² HARDING, KAVRUK 2013, 43.

been made to confirm it.²³ The dating of timber samples pointed not to the Roman era, but to the Iron Age.²⁴ Even though the authors do not specify which period of the Iron Age is concerned, I hold the opinion that it refers to the La Tène period, preceding the Roman conquest. Likewise, excavations carried out at Băile Figa (Bistrița-Năsăud County) have yielded timber implements for extracting the salt from the springs, some likewise dating from the Iron Age (4th-3rd cent. BC).²⁵

Recently, the project led by M. Alexianu on the ethnoarchaeology of salt²⁶ provided important field researches, published partially by the project leader, V. Kavruk, D. Ștefan, V. Vasilache,²⁷ myself and A. Asăndulesei.²⁸

Besides these investigations, there are the identifications of exploitation points previously made by V. Wollmann at Ocna Mureș, Turda, Cojocna, Sic, Pata, Ocna Dejului, Ocna Sibiului, Domnești, Rogna, and Ocnele Mari.²⁹

As one can notice, there are few archaeological investigations. Particularly important seems to be the continuity found at Sânpaul between the La Tène and Roman periods. Ample systematic excavations have been carried out at Băile Figa, identifying another La Tène exploitation. We do not know, however, if this exploitation was also used in the Roman period. In any case, not far from this site is Domnești, home to a salt spring and the discovery of an inscription set up by Atticus, the slave of a *conductor pascui et salinarum*.³⁰

Even though from a quantitative point of view the surviving sources (both archaeological and epigraphic) are few, they nevertheless provide very important data with regards to the exploitation of salt in Roman Dacia.

The main objectives of larger approach should consist in analyzing the archaeological researches on salt exploitation achieved on the territory on Roman Dacia, in discussing the epigraphic information in order to have a better understanding on salt exploitation, administration and on the relationship of the mining and administrative staff with the military personnel. These types of information should be combined and finally should offer a global image on salt exploitation in Roman Dacia; besides, one should remark the particularities of salt production, industry and consumption of this province in comparison with the Roman world.

²³ HARDING, KAVRUK 2013, 43.

²⁴ HARDING, KAVRUK 2013, 47. S. also HARDING 2015, 216; HARDING 2016, 377.

²⁵ HARDING, KAVRUK 2013, 60-64, 120-121. See also HARDING, KAVRUK 2010, 139; HARDING 2015, 214; HARDING 2016, 378.

²⁶ KAVRUK, CURCĂ 2017.

²⁷ KAVRUK, ȘTEFAN, ALEXIANU, VASILACHE 2019. S. also the analysis of ancient texts (CURCĂ 2018).

²⁸ MIHAILESCU-BÎRLIBA 2019b; MIHAILESCU-BÎRLIBA, ASĂNDULESEI 2019. See more recently MIHAILESCU-BÎRLIBA, ALEXIANU 2021; MIHAILESCU-BÎRLIBA 2022a; MIHAILESCU-BÎRLIBA 2022b.

²⁹ WOLLMANN 1996, 241-244.

³⁰ ILD 804.

References

- ACKNER, M. J. 1856. Die römischen Alterthümer und deutschen Burgen in Siebenbürgen, *Mittheilungen der k. k. Central-Commission zur Erforschung und Erhaltung der historischen Baudenkmale* 1: 20-57.
- BENEA, D. 2007a. Cu privire la administrarea salinelor din Dacia romană, *Analele Banatului Serie Nouă* 15: 41-46.
- BENEA, D. 2007b. Cu privire la organizarea exploatării sării în Dacia romană. In: *Meșteșuguri și artizani în Dacia romană*, 91-112, Timișoara.
- CHIRICESCU, A. 2006. Repertoriul selectiv al fântânilor de apă sărată din estul Transilvaniei. In: V. Cavruc, A. Chiricescu (eds.), *Sarea, Timpul și Omul*, 164-167. Sfântu Gheorghe.
- CURCĂ, R.-G. 2018. *Salinae* in Justinian's Digest, *Studia Antiqua et Archaeologica* 24/1: 131-137.
- FICHTEL, J. E. 1780. *Beytrag zur Mineralgeschichte von Siebenbürgen*, II, Nürnberg.
- FRIDWALDSZKY, J. 1767. *Mineralogia Magni Principatus Transilvaniae*, V. Cluj.
- HARDING, A. 2015. Salt exploitation in the later prehistory of the Carpathian Basin, *Documenta Praehistorica* 42: 211-217.
- HARDING, A. 2016. Balkan salt in Antiquity. In: K. Bacvarov, R. Gleser (eds.), *Southeast Europe and Anatolia in prehistory. Essays in honor of Vassil Nikolov on his 65th anniversary*, 375-378. Bonn.
- HARDING, A., KAVRUK, V. 2010. A prehistoric salt production site at Băile Figa, Romania, *Eurasia Antiqua* 16, 131-167.
- HARDING, A., KAVRUK, V. 2013. Transylvania. In: A. Harding, V. Kavruk (eds.), *Exploration in Salt Archaeology in the Carpathian Zone*, 41-153. Budapest.
- HARDING, A., Munteanu, R., Matei, Gh., Rența, E. 2006. Repertoriul selectiv al siturilor arheologice cu vestigii ale exploatării sării din România. In: V. Cavruc, A. Chiricescu (eds.), *Sarea, Timpul și Omul*, 56-74. Sfântu Gheorghe.
- ILD. *Inscripții latine din Dacia*, I-II, Bucharest.
- KAVRUK, ȘTEFAN, ALEXIANU, VASILACHE 2019. A salt production site at Gherla-Valea Sărată (Transylvania). Preliminary report, *Studia Antiqua et Archaeologica* 25/1: 17-47.
- KAVRUK, V., CURCĂ, R.-G. 2017. A new exploratory project: The ethnoarchaeology of salt in the Inner Carpathian area of Romania, *Studia Antiqua et Archaeologica* 23/2: 353-361.
- MIHAILESCU-BÎRLIBA, L. 2016. Les salines en Dacie romaine: remarques sur le personnel administratif, *Studia Antiqua et Archaeologica* 22/1: 51-58.
- MIHAILESCU-BÎRLIBA, L. 2018. The importance of salt exploitation in Roman Dacia. The case of Ocna Mureș (*Salinae*), *Journal of Ancient History and Archaeology* 5/4: 32-36.
- MIHAILESCU-BÎRLIBA, L. 2019a. Salt exploitation in Roman Dacia. A Larger Overview. In: L. Mihailescu-Birliba, W. Spickermann (eds.), *Roman Army and Local Society in the Limes Provinces of the Roman Empire. Papers of an International Conference, Iași, June 4th-6th, 2018*, 163-186. Rahden (Westf.).

- MIHAILESCU-BÎRLIBA, L. 2019b. Salt exploitation in Roman Dacia. Modern sources and new archaeological surveys, *Acta Musei Napocensis* 56/I: 135-144.
- MIHAILESCU-BÎRLIBA, L. 2022a. Roman army and salt exploitation in Sânpaul-Mărtiniș-Ocland area, *Journal of Ancient History and Archaeology* 9/1: 95-107.
- MIHAILESCU-BÎRLIBA, L. 2022b. Salt administration in Roman Dacia. An overview. In: J. Boardman, J. Hargrave, A. Avram, A. V. Podossinov (eds.), *Connecting Ancient West and East. Studies Presented to Prof. Gocha R. Tsetskhladze*, 145-156. Leuven-Paris-Bristol CT.
- MIHAILESCU-BÎRLIBA, L., ALEXIANU, M. 2021. Salt exploitation and Roman army in Dacia: the Ocna Dejului-Sic-Cojocna-Gherla area. In: L. Mihailescu-Bîrliba, I. Dumitrache (eds.), *Persevera lucere. Studia in memoriam Octaviani Bounegru*, 119-124. Wiesbaden.
- MIHAILESCU-BÎRLIBA, L., ALEXIANU, M. 2021. Salt exploitation and Roman army in Dacia: the Ocna Dejului-Sic-Cojocna-Gherla area. In: L. Mihailescu-Bîrliba, I. Dumitrache (eds.), *Persevera lucere. Studia in memoriam Octaviani Bounegru*, 119-124: Wiesbaden.
- MIHAILESCU-BÎRLIBA, L., ASĂNDULESEI, A. 2019. Roman Army and Salt Exploitation in Dacia, *Journal of Ancient History and Archaeology* 6/3: 27-48.
- MOSCA, D. 2018. Prima hartă a zăcămintelor de sare din România (1780). Zoponimele corespondente actuale. *Diacronia* 7: 1-11.
- TSIGARIDA, I. 2012. Bereiche der zentralen Einflussnahme auf Salz im römischen Reich am Beispiel der Provinz Dakien. In: V. Nikolov, K. Bacvarov (eds.), *Salz und Gold: die Rolle des Salzes in prähistorischen Europa. Akten der internationalen Fachtagung (Hum boldt-Kolleg) in Provadia (Bugarien) 30 September-4 October 2010*, 313-322. Provadia-Veliko Târnovo.
- WOLLMANN, V. 1996. *Mineritul metalifer, extragerea sării și carierele de piatră în Dacia romană*. Cluj-Napoca.



© 2022 by the authors; licensee Editura Universității Al. I. Cuza din Iași. This article is an open access article distributed under the terms and conditions of the Creative Commons by Attribution (CC-BY) license (<http://creativecommons.org/licenses/by/4.0/>).