Hungarian Historical Review 9, no. 2 (2020): 331–342

Along the Danube and at the Foothills of the North-Eastern Hungarian Mountains: Some Data on the Distribution of Stone Raw Materials in the Late Iron Age

Zoltán Czajlik
Eötvös Loránd University
czajlik.zoltan@btk.elte.hu

Stones as raw materials are important environmental resources often found at prehistoric sites. Since their various types essentially retained their original geological features, it is generally relatively easy to identify their origin. Nevertheless, there is hardly any systematic research on late prehistoric stone raw materials. Furthermore, these materials are mentioned very inconsistently and the geological terms, definitions and analyzes are absent from the discussions. The general picture that we can sketch based on secondary literature is therefore mosaic-like. However, it is by no means impossible to identify extraction sites. Based on on-site experience and using modern analyzes, it is possible, for example, to differentiate between individual types of sandstone and andesite. From the perspective of future research, analyzes of late Iron Age stone materials from well-studied archaeological contexts could contribute to understand better how stones as raw materials were used in late prehistoric periods.

Keywords: natural resources, stone raw materials, Carpathian Basin, Iron Age

Introduction

Stone raw materials are important environmental resources. They offer a good topic for research, since they are usually frequently present among the finds of both prehistoric settlements and cemeteries. An additional advantage of this material is that the various ways in which they were modified and put to use did not change them significantly, unlike in the case of many other raw materials, such as clay ceramics or in various ores. Given that their original geological conditions are essentially preserved, it is usually comparatively easy to identify their provenance. Regrettably, in spite of the suitability of this resource as a useful tool on the basis of which to pursue study of a given period, there is very little systematic research regarding stone raw materials from the Late Iron Age, in contrast with the secondary literature on earlier periods of prehistory. These materials are mentioned only inconsistently in the scholarship, and the geological terms, definitions, and analyses are missing from these discussions. The general

 DOI 10.38145/2020.2.331

image we can outline concerning the secondary literature is mosaic-like, and this reflects the lack of research.

The most important figures in the history of the Carpathian Basin in the Late Iron Age were the Celts. Their arrival and presence in the area can be reconstructed in comparative detail on the basis of historical sources and archaeological evidence. Regarding the latter, attention should be drawn to the several waves of western immigration which began in 450 BC and to the changing settlement areas of the different periods.[1] Furthermore, the remarkable

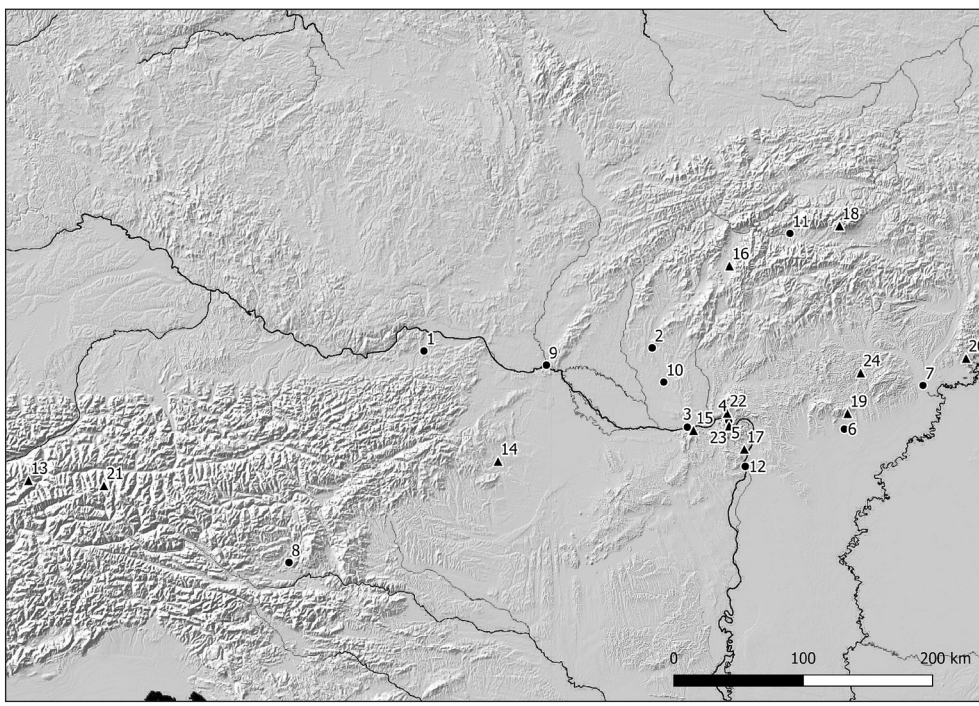

Figure 1. Archaeological sites from the Celtic period in the Carpathian Basin and in the Eastern Alps mentioned in the paper (black dots): a. 5th–3rd centuries BC, 1. Pottenbrunn – Steinfeld, 2. Nitra – Šindolka, 3. Süttő – Sáncföldek, 4. Szob – Kőzúzó, 5. Pilismarót – Basaharc, 6. Ludas – Varjú-dűlő, 7. Sajópetri – Hosszú-dűlő/Homoki-szőlőskert, b. 2nd–1st centuries BC, 8. Magdalensberg, 9. Bratislava – Devín, 10. Nitriansky Hrádok, 11. Liptovská Mara, 12. Budapest – Gellérthegy
Lithic raw material sources in the Carpathian Basin and in the Eastern Alps mentioned in the paper (black triangles): a. Identified, 13. Riepenkar, 14. Oberpullendorf – Pauliberg, 15. Lábatlan, 16. Rakša, 17. Budakalász – Ezüst-hegy, 18. Tatra Mountains, 19. Domoszló, 20. Tokaj Mountains, b. Assumed, 21. High Tauern, 22. Szob – Csák-hegy, 23. Pilismarót – Szekrény-hegy, 24. Ózd – Pétervására Hills.
Map edited by Zoltán Czajlik and Balázs Holl.

1 Szabó, "Les Celtes orientaux."

changes observed from the third century BC should be mentioned, which are associated with the formation of many larger and more structured settlements and with the more intensive utilization of natural resources. This process is well documented in the Western Celtic territories and especially in Czech lands and Moravia,[2] further important study has been published from the Scordiscan region,[3] but it cannot yet be outlined in the whole Eastern Celtic area. Similarly, the development of the next economic-technological stage, the establishment of the *oppida* (fortified Iron Age settlements representing the pre-industrial level), is not common here, and these settlements existed much shorter period in the region east from the Danube than in the west.

Taking into account the archaeological-historical circumstances, we would list the most important available data about the use of the raw materials needed for stone tools. Despite the obvious difficulties and the lack of data, due the increasingly intense archaeometric research which has been underway over the course of the past few decades, certain raw material sites and the networks in which they were involved are slowly being outlined, as are their positions in the regional resource supply chains.

Stone Tools

Although various stone tools were often found in the archaeological material of Celtic settlements, they were only rarely studied in detail, with clear discussions of their geological provenance. Two main tool categories should be given primary consideration in the research: the sharpening stones and the grinding/mill stones. For these different functions, stones with different characteristics were needed, as the first tool was used for sharpening metals, while the second was mainly used for grinding grain. While in the first case stones which contained quartz (e.g. sandstone) are especially favorable, hard rock types (e.g. extrusive igneous volcanic rocks: andesite, dacite, etc.) are suitable for grinding.

1. Sharpening stones

Most of the known sharpening stones were discovered used and fragmented, buried in buildings within settlement areas. In the Eastern Celtic territories, however, most of the large cemeteries also had some finds in the tombs,

2 Čisťakova et al., "Craft production," cf. Waldhauser, "Keltské rotační mlýny," and Wefers, *Latènezeitliche Mühlen*.

3 Ljuština, "Rotary querns."

and sharpening stones were unearthed among the personal belongings of the deceased.

The excavated whetstones of the Pottenbrunn cemetery (Austria, representing the Early Celtic Period) are made from flysch (sandstone; tomb no. 520, no. 1005) and quartzite originating from greywacke strata.[4] According to the authors, with regards to the provenance of the raw material, the gravelly alluvia of the Traisen River should be primarily taken into account. i.e. these objects seem to be made of local secondarily deposited raw materials.

The evaluation of the material from the Celtic site at Süttő - Sáncföldek is still in progress, but based on the excavated features, it can be dated to the period between the second half of the fourth century BC and the beginning or middle of the third century BC.[5] The whetstones of the site were studied by Dóra Kürthy, and most of them can be linked to the Lábatlan Sandstone Formation, located 8–10 km to the east of the Süttő plateau.

The sharpening stones from the third-century BC settlement of Sajópetri Hosszú-dűlő were mostly made of hard, fine-grained sandstone.[6] The exact geographical provenance has not been identified, but there are several different types of sandstone nearby among the sedimentary rocks in the valley of the Sajó River, i.e. within a distance of 15–20 km. It also should be noted that 50–60 km away from this microregion, connected to the valley from the West are the Ózd-Pétervására Hills, which include a sandstone zone significant in the regional context.[7] It would definitely be worth dedicating a more detailed geoarchaeological study to it. In the contemporary cemetery of Sajópetri–Homoki szőlőskert (grave nr. 62/136, 1 km to the south of the settlement) and in the pit 03.46A.194 of the settlement, whetstones from rhyolitic tuff were also excavated. This material originates from the east, from the Tokaj Mountains.[8] Similarly to the case of the Ózd-Pétervására Hills, the distance between the Sajópetri microregion, the southern part of the Sajó Valley and this raw material source is 40–50 km.

The Celtic settlement of Nitra-Šindolka is from the same period, and it has also been thoroughly studied. The majority (13) of the 17 geologically determined sharpening stones proved to be sandstone. Their provenance is unknown.[9]

4 Ramsl and Draganits, "Steinartefakte aus Pottenbrunn."
5 Czajlik et al., "Traces of prehistoric land use," 208.
6 Czajlik et al., "Matériel lithique," 279.
7 Horváth et al. "The Vajdavár Hills."
8 Czajlik and Mohai, "Pierres à aiguiser," 240.
9 Illášová, "Steinartefakte," 337.

The whetstone found in one of the pits of the *oppidum* at Gellérthegy, which is from the Late Celtic period (end of the end century BC and beginning of the first), was made of a fine variant of the Hárshegy sandstone, which was identified by Péter Bohn as a type known from the Ezüst-hegy in Budakalász.[10] This area can be reached along the Danube River on a 13–14 km long road, so it can be considered, from point of view of Gellérthegy, a microregional natural resource. The whetstones and polishing tools of the Bratislava-Devín *oppidum* were published by Karol Pieta as finds belonging to a workshop. Most of them are sandstone, but there is one tool made of rock crystal, which suggests goldsmithing.[11] As a possible provenance area for rock crystals within the Carpathian Basin, we can mention the Eastern Alps, specifically the High Tauern. This hypothesis is indirectly confirmed by the rock crystals unearthed at Magdalensberg,[12] and also by the Neolithic rock crystal mining site discovered at Riepenkar. Although the latter site is far from Devín, which is thought to be the western gateway to the Carpathian Basin, a number of rock crystal finds indicate the important route connecting the Riepenkar zone with the Inn and Danube valleys.[13]

2. Grinding stones, millstones

At the Celtic site of Süttő–Sáncföldek, we also excavated broken pieces of grinding stones deposited in a pit. Their material is andesite, and according to the research of Dóra Kürthy, they originate from the Börzsöny or the Visegrád Mountains.[14] Although further geological studies are necessary to determine their provenance accurately, it is certainly noteworthy that on the western edge of the source area of the andesite, on both banks of the Danube, very important, partly contemporary Celtic sites are located. The Celtic cemetery of Szob-Kőzúzó was found at the mouth of the Ipoly River.[15] The settlement presumably belonging to the cemetery[16] was discovered by the riverside approximately 500 m higher. Farther, 3 km away, on Csák Hill an andesite quarry that is still in use is located. On the right side of the Danube, in Pilismarót-Basaharc, another Celtic cemetery was excavated which is also significant in the supra-regional

10 Bohn, "Tabáni kelta leletanyag," 243.
11 Pieta, *Die keltische Besiedlung*, 174–75.
12 Niedermayr, "Die Mineralvergesellschaftungen," 55.
13 Leitner et al., "Die Ostalpen als Abbaugebiet," 66–68.
14 Czajlik et al., "Traces of prehistoric land use," 211.
15 Tankó, "The Graves of Szob."
16 Dinnyés et al., *Magyarország régészeti topográfiája*, 324–25.

context.[17] The contemporary settlement[18] was identified ca. 1–1.5 km east of the graves, on the riverbank. The best-known locality of andesite in the region is 4–5 km southeast of the Celtic sites of Pilismarót, on Szekrény Hill. For exact identification, further research is needed, but we know that the raw material of the grinding stones of Süttő originates from a distance of at least 40 km downstream.

The Late Iron Age third-century BC settlement of Sajópetri Hosszú-dűlő was excavated on an area covering more than 40,000 m^2, and it provided a huge amount of stone material, including larger, mostly fragmented tool stones. The only intact grinding stone was unearthed in the votive ensemble 02.A.93. The best-preserved rotary quern fragment was in the building 03.B.32. Most of these stone tools belong to semi subterranean buildings, and they are made of porous/compact andesite. To identify the provenance area of the andesite, we took into account the probable origin of the rhyolite tuff (Mád/Tállya/Szerencs) which was also discovered in the settlement, and in 2007, we suggested that it comes from the Tokaj Mountains, which are 40–45 km away, but we did not exclude the possibility that they came from the Mátra Mountains.[19]

Millstone and grinding stone exploitation sites (in total exceeding an area of 10km^2) were discovered at the foothills of the Mátra Mountains in the Domoszló microregion.[20] At the Pipis-hegy, Középső-hegy, Hosszú-hegy, Hegyes-hegy (etc.) a unique rock type of the Nagyhársas Andesite Formation was utilized. The size and the shape of the andesite bombs and boulders made it easier to produce the tool stones.[21] Based on geological analyses of excavated archaeological stone tools, the andesite from Domoszló was used as early as the Middle Bronze Age (Füzesabony culture) and until the seventeenth century (Szendrő-Vár), i.e. this raw material may have been known to the Celts as well. The most significant Celtic site in the surroundings is discussed in a 2012 monograph[22] on the cemetery of the Ludas–Varjú-dűlő, 10–12 km south-southwest of the raw material extraction site. The necropolis was established in the same period as the Sajópetri site, in the third century BC, but a settlement with a similar scale has not been discovered around it yet. Before the expansion

17 Jerem, "Pilismarót – Basaharc, Ungarn."
18 Horváth et al., *Magyarország régészeti topográfiája*, 291.
19 Czajlik et al., "Matériel lithique," 283.
20 Péterdi et al., "Domoszló: Grinding Stone."
21 Péterdi et al., "Domoszló: őrlő- és malomkő."
22 Szabó et al., *La nécropole celtique*.

of a lignite mine, there were rescue excavations on an area of 30 hectares,[23] and field surveys were done along the Bene Valley,[24] In the course of both, remains of smaller farmsteads were found in the vicinity. Nothing has been published on the stone material of the excavated settlement remains in Ludas, and there were no andesite tool stones in the burial sites of the Varjú-dűlő. However, there may still have been a connection between the site and the Mátra Mountains, as the graves are oriented to the main peaks.[25]

Based on the above-mentioned facts, we can assume that in the Late Iron Age, andesite was in use in the Börzsöny/Visegrád Mountains, the Tokaj Mountains, and the Mátra Mountains. In addition, previous studies suggest that the extraction of andesite in northern Hungary began in the Cserhát Mountain range relatively early, as the basaltic andesite millstones of the Sarmatian settlement of Üllő (third and fourth centuries AD) suggest.[26]

Péter Bohn examined two millstones from the Late Celtic *oppidum* at Budapest-Gellérthegy.[27] He identified the provenance area as laying either in the Börzsöny Mountains or the Visegrád Mountains, but no further research was conducted. In this case, assuming waterborne transport, we can calculate a distance of 50–60 km. Other *oppida* on the banks of the Danube (Devín and Bratislava) draw attention to a different important raw material source, namely the basalt of Pauliberg at Oberpullendorf (Austria).[28] During the Late Celtic period, this basalt was transported not only to the Danube Valley but also to areas lying more to the north, to the Moravian territories.[29]

The millstone found in a subterranean building at the excavation site of the fortified settlement of Nitriansky Hrádok belongs to the same period, and it is also made of andesite.[30] Although in the Northern Carpathians (e.g. Liptovská Mara), earlier Tatra granite and rhyolite were also used for stone tools, a remarkable quarry and production area for andesite grinding stones with semi-finished and waste products is known from Rakša, where there is a Late Celtic settlement nearby.[31] The site is located far from Nitriansky Hrádok

23 Domboróczki, "Recherches archéologiques," 168.
24 Czajlik et al., "Recherches microrégionales."
25 Szabó and Tankó, "La nécropole celtique," 88.
26 Péterdi et al., "Bazaltos andezit."
27 Bohn, "Tabáni kelta leletanyag."
28 Zirkl, "Zur Herkunft der Rohstoffe."
29 Čižmář and Leichmann, "Pozdně laténské žernovy," 126.
30 Pieta, *Die keltische Besiedlung*, 173.
31 Ibid.

(130 km), but probably most of the route (85–90 km) could have been made on the River Nitra.

One can also mention several relevant studies done outside the Carpathian Basin, in neighboring territories, such as northern Italy and Bohemia. The fourth-century and third-century BC grinding stones from the material of Monte Bibele originate from the volcanits located around Orvieto, which was at least 300 km away from the site across the Apennines and much farther if using sea lanes.[32] The era of the *oppida* is represented in Bohemia by specialized centers like Lovosice and the Kunětická Mountains. They supplied the entire northern part of the region and often even more distant areas with their products.[33]

Concluding Remarks

We examined three regions from the period of the Celtic expansion to the Carpathian Basin: the Traisental; the section of the Danube between Devín and Budapest; and the border zone of the Hungarian Plain and the mountains in northern Hungary, the region from the Mátraalja to the Tokaj Mountains. In the Pottenbrunn, Süttő, and Sajópetri microregions, the evidence suggests that the sandstone for sharpening stones was supplied mostly from local/microregional sources of raw materials. Nevertheless, in the case of Sajópetri, we should bear in mind the use of two different regional sources for raw materials, the Pétervására Hills for sandstone and the Tokaj Mountains for rhyolites. Based on the available data, in the oppidum at Budapest-Gellérthegy, we can observe the use of microregional sandstone raw materials, while the rock crystal artefacts in the Devín *oppidum* indicate an economic background that made it possible to procure special raw materials for these urban settlements.

The distribution of grinding stones suggests a regional network system. Andesite, the most commonly identified raw material in our region, is clearly linked to its geographical source sites within the Börzsöny/Visegrád Mountains and the Tokaj Mountains, and in the more distant Mátra Mountains we can even determine a very significant extraction site for it (the Domoszló region). The number of grinding stones from the fourth and third centuries BC with known provenance is still small, but in the case of Süttő and Sajópetri, we see that these heavy tools were transported over a relatively long distance.

32 Renzulli et al., "Provenance and trade."

33 Čisťakova et al., "Craft production," 234.

The exploitation of andesite from the Börzsöny/Visegrád Mountains did not stop during the period of *oppida*, as the findings at Budapest-Gellérthegy suggest, although this cannot be confirmed by a contemporary settlement discovered on the Danube Bend. We do not even have indirect data on the utilization of the andesite of the Domoszló region and Tokaj Mountains from this period, but we know of a mining site in the northern Carpathians (Rakša). The tools of several Late Celtic settlements in Moravia and millstones from the *oppidum* in Devín and Bratislava were made of basalt, and in their case, provenance can be determined precisely (Oberpullendorf–Pauliberg, Austria).

The studies listed above show that, in the case of the grinding/mill stones, the quality of the raw material was of primary importance, and despite their large size and weight, they were transported over considerable distances. At the same time, this also means that high-quality raw material may have significantly increased the value of the resource supply of a given micro-region.

We have seen that it is far from impossible to identify extraction sites. Based on field experience and with the use of modern analyzes, individual types of sandstone and andesite can be distinguished from one another. From the perspective of future research, we need analyses of Late Iron Age stone materials from well-studied archaeological contexts. Such analyses may lead us to a better understanding of the late prehistoric role of this natural resource, which has been somewhat neglected in the secondary literature.

Bibliography

Bohn, Péter. "Tabáni kelta leletanyag vizsgálata" [Analysis of Celtic findings from the Tabán]. *Archaeológiai Értesítő* 91 (1964): 243–48.

Čist'akova, Viktoria, Petr Holodňák, Tomáš Mangel, Pavel Sankot, and Natalie Venclová. "Craft production in the La Tène period." In *The Celts: Bohemia from the 8th century to the 1st century BC*, edited by Jiři Militký, Jan Kysela, and Marika Tisucká, 254–59. Prague: National Museum, 2019.

Čižmář, Miloš, and Jaromír Leichmann. "Pozdně laténské žernovy na Moravě" [Late Latene millstones in Moravia]. *Památky Archeologické* 98 (2007): 109–28.

Czajlik, Zoltán, Rita Mohai, and Ferenc Molnár. "Matériel lithique." In *L'habitat de l'époque de La Tène à Sajópetri – Hosszú-dűlő*, edited by Miklós Szabó and Zoltán Czajlik, 275–84. Budapest: l'Harmattan, 2007.

Czajlik, Zoltán, Károly Tankó, and Katalin Gherdán. "Recherches microrégionales dans les environs de Ludas." In *La nécropole celtique à Ludas – Varjú-dűlő*, edited by Miklós Szabó, Károly Tankó, and Zoltán Czajlik, 171–80. Budapest: l'Harmattan, 2012.

Czajlik, Zoltán, and Rita Mohai. "Pierres à aiguiser de la nécropole Sajópetri – Homoki-szőlőskert." In *La nécropole celtique à Sajópetri – Homoki-szőlőskert*, edited by Miklós Szabó, Zoltán Czajlik, and Károly Tankó, 235–48. Paris: l'Harmattan, 2018.

Czajlik, Zoltán, Eszter Fejér, Katalin Novinszki-Groma, András Jáky, László Rupnik, F. Zsófia Sörös, András Bödőcs et al. "Traces of prehistoric land use on the Süttő plateau." In *Early Iron Age Landscapes of the Danube Region*, edited by Matija Črešnar, and Marko Mele, 185–219. Graz–Budapest: Archaeolingua, 2019.

Dinnyés, István, Klára Kővári, Judit Kvassay, Zsuzsa Miklós, Sarolta Tettamanti, and István Torma. *Magyarország Régészeti Topográfiája* 9: *Pest megye régészeti topográfiája. A szobi és a váci járás* [Archaeological topography of Hungary: archaeological topography of Pest County, Szob and Vác districts]. Budapest: Akadémiai Kiadó, 1993.

Domboróczki, László. "Recherches archéologiques à Ludas – Varjú-dűlő." In *La nécropole celtique à Ludas – Varjú-dűlő*, edited by Miklós Szabó, Károly Tankó, and Zoltán Czajlik, 155–69. Budapest: l'Harmattan, 2012.

Horváth, István, Márta H. Kelemen, and István Torma. *Magyarország Régészeti Topográfiája.* Vol. 5, *Komárom megye régészeti topográfiája. Esztergom és a dorogi járás* [Archaeological topography of Hungary: archaeological topography of Komárom County, Esztergom and the Dorog district]. Budapest: Akadémiai Kiadó, 1979.

Horváth, Gergely, Zoltán Utasi, András Hegedűs, and Zoltán Pintér. "The Vajdavár Hills: Sandstone Cliffs, Hoodoos and Gorges." In *Landscapes and Landforms of Hungary: World Geomorphological Landscapes*, edited by Dénes Lóczy, 157–67. Cham: Springer, 2015.

Illášová, L'udmila. "Steinartefakte aus der Laténezeitlichen Siedlung." In *Nitra-Šindolka: Nitra-Šindolka Siedlung aus der Laténezeit, Katalog*, edited by Gertrúda Březinová, 335–38. Bratislava: VEDA, 2000.

Jerem, Erzsébet. "Pilismarót – Basaharc, Ungarn." In *Lexikon zur keltischen Archäologie*, edited by Susanne Sievers, Otto H. Urban, and Peter C. Ramsl, 1481–82. Vienna: ÖAW, 2012.

Leitner, Walter, Michael Brandl, and Thomas Bachnetzer. "Die Ostalpen als Abbaugebiet und Versorgungsregion für Silex und Bergkristall in der Prähistorie." In *Bergauf bergab: 10000 Jahre Bergbau in den Ostalpen. Wissenschaftlicher Beiband zur Ausstellung im Deutschen Bergbau-Museum Bochum vom 31.10.2015 – 24.04.2016. Im Vorarlberg Museum*

Bregenz vom 11.06.2016 – 26.10.2016, edited by Thomas Stöllner and Klaus Oeggl, 59–69. Bochum: Deutsches Bergbaumuseum, 2015.

Ljuština, Marija. "Rotary querns from the territory of the Scordisci and potential routes of food technology transfer." In *Wege und Transport. Beiträge zur Sitzung der AG Eisenzeit während der 80. Verbandstagung des West- und Süddeutschen Verbandes für Altertumsforschung e.V. in Nürnberg 2010*. Beiträge zur Ur- und Frühgeschichte Mitteleuropas 69, edited by Claudia Tappert, Christiana Later, Janine Fries-Knoblach, Peter Christoph Ramsl, Peter Trebsche, Stefanie Wefers, and Julian Wiethold, 145–55 Langenweissbach: Beier & Beran, 2012.

Niedermayr, Georg. "Die Mineralvergesellschaftungen der Hohen Tauern." In *Mineral & Erz in den Hohen Tauern*, edited by Robert Seemann, 55–88. Vienna: Naturhistorisches Museum, 1994.

Péterdi, Bálint, György Szakmány, Katalin Judik, and Gábor Dobosi. "Bazaltos andezit nyersanyagú szarmata szerszámkövek kőzettani és geokémiai vizsgálata (Üllő 5. lelőhely)." *Archeometriai Műhely* 6, no. 2 (2009): 43–59.

Péterdi, Bálint, Katalin T. Bíró, Zoltán Tóth, Éva Bertalan, Zsolt Horváth, Ágnes Freiler, Zsuzsanna Beke et al. "Domoszló: őrlő- és malomkő nyersanyag-kitermelőhely és műhely a Mátrában: első régészeti elterjedés-vizsgálatok – Domoszló: grinding stone, millstone and quernstone exploitation and workshop site in the Mátra Mts: first studies on archaeological distribution." *Archeometriai Műhely* 13, no. 4 (2016): 219–36.

Péterdi, Bálint, Katalin T. Bíró, and Zoltán Tóth. "Domoszló: Grinding Stone and Millstone Production Centre in Hungary: Preliminary Results." In *The Exploitation of Raw Materials in Prehistory: Sourcing, Processing and Distribution*, edited by Telmo Pereira, Xavier Terradas, and Nuno Bicho, 90–97. Cambridge: Cambridge Scholars Publishing, 2017.

Pieta, Karol. *Die keltische Besiedlung der Slowakei. Jüngere Latènezeit*. Nitra: Archeologický Ústav SAV, 2010.

Ramsl, Peter C. and Erich Draganits. "Steinartefakte aus Pottenbrunn." In *Das eisenzeitliche Gräberfeld von Pottenbrunn, SG St. Pölten, Niederösterreich*. Fundberichte aus Österreich Materialheft A11, edited by Peter C. Ramsl, 366. Vienna: Horn, 2002.

Renzulli, Alberto, Patrizia Santi, Giovanni Nappi, Mario Luni, and Daniele Vitali. "Provenance and trade of volcanic rock millstones from Etruscan-Celtic and Roman archaeological sites in Central Italy." *European Journal of Mineralogy* 14 (2002): 175–83. doi: 10.1127/0935-1221/2002/0014-0175.

Szabó, Miklós. "Les Celtes orientaux." In *Le bassin des Carpates avant l'arrivée des Hongrois : Celtes, Romains, peuples barbares du haut Moyen Âge dans le bassin du Danube 400 av. J.-C.*

– *895 apr. J.-C.*, edited by Miklós Szabó, László Borhy, Therese Olajos, Noël-Yves Tonnerre, and István Zimonyi, 17–146. Rennes: PUR, 2019.

Szabó, Miklós, and Károly Tankó. "La nécropole celtique à Ludas – Varjú-dűlő." In *La nécropole celtique à Ludas – Varjú-dűlő*, edited by Miklós Szabó, Károly Tankó, and Zoltán Czajlik, 9–152. Budapest: l'Harmattan, 2012.

Szabó, Miklós, Károly Tankó, and Zoltán Czajlik, eds. *La nécropole celtique à Ludas – Varjú-dűlő*. Budapest: l'Harmattan, 2012.

Tankó, Károly. "The graves of Szob and some southern aspects of La Tène finds from northern Hungary." In *The Clash of Cultures? The Celts and the Macedonian World,* edited by Mitja Guštin and Wolfgang David, 259–67. Manching: Kelten-Römer Museum, 2014.

Waldhauser, Jiři. "Keltské rotační mlýny v Čechách / Keltische Drehmühlen in Böhmen" [Celtic rotary mills in Bohemia]. *Památky archeologické* 72 (1981): 153–221.

Wefers, Stephanie. *Latènezeitliche Mühlen aus dem Gebiet zwischen den Steinbruchrevieren Mayen und Lovosice*. Monographien RGZM 95. Vulkanpark-Forschungen 9. Mainz: RGZM, 2012.

Zirkl, Erich Johann. "Zur Herkunft der Rohstoffe einiger latènezeitlicher Handmühlen." *Archaeologia Austriaca* 18 (1955): 90–92.