Preliminary report on a quern and millstone production site from the Iron Age and the Medieval Period at Mount Ruderbüsch, Western Eifel Region, Germany

VERA HOLTMEYER-WILD


The historical quern and millstone production site at Mount Ruderbüsch is situated in the volcanic western Eifel region and is one of the biggest such finds in the area. Due to a modern basanite quarry at the site, archaeological investigations had become necessary. Previous surveys had pointed to fabrication in the Iron Age and in the Medieval Period, which was confirmed during the new investigations from 2007 to 2011. From the Iron Age, a huge stone heap containing no tools but very few small finds and numerous saddle querns was discovered in addition to two presumed quern production sites. The querns can be used to date the Iron Age remains to the Hallstatt and Early La Tène period. In the medieval quarrying district at Mount Ruderbüsch, a small area with three stone heaps was examined. They did not contain tools or other small finds but five large millstones. Those and two other millstones, which were found outside of the heaps, can be compared to finds from the 12th century at Mayen. Because of its importance within the western Eifel region, Mount Ruderbüsch occupies a very interesting position in the research of historical quarrying structures and can be correlated to similar sites.

Vera Holtmeyer-Wild, Dromos Archäologie, Zur Mühle 25a, D-53639 Königswinter, Germany. Phone: (+49) 1725470113. E-Mail: dromos@t-online.de

Keywords: saddle querns, Iron Age, millstones, quarries, Eifel

From 2007 to 2011, archaeological investigations were conducted at Mount Ruderbüsch (Oberbettingen, Rhineland-Palatinate) in the western Eifel region (Fig. 1), due to the establishment of a modern basanite quarry at the site. The site is very well suited to quern and millstone production and is one of the biggest such finds in the area (Nortmann 2006:452). It had been known from surveys for many years (Hörter 1984:206–210, 1994:96–101) and the entire extinct volcano had been the site of opencast mining for many centuries. Medieval millstone quarries at Mount Ruderbüsch were already mentioned in geological records during the nineteenth century (Steininger 1821:109, 1853:128).

A survey of the volcanic Eifel region and the publication of the historical quarrying sites by F. Hörter junior (1994:60–178) revealed Iron Age exploitation as well (Hörter 1994:96–101). The new field studies confirmed the presumed use of the mountain’s stone in the Iron Age as well as in the Medieval Period and provided many interesting details, especially concerning the Iron Age exploitation.

The site is situated in the volcanic Eifel region, which is divided into two large Quaternary volcanic areas (Fig. 1). The eastern area stretches from the volcanos around Mayen and Laach Lake to the Rhine Valley. The western area corresponds approximately with the modern administrative district of Landkreis Vulkaneifel (Meyer 1994:305, Schmincke 2000:90). In the eastern area, the historical quarrying of querns and millstones shows a focused centre at the quarries around the cities of Mayen and Niedermendig (Hörter 1994:71–78, 89–95, Mangartz 2006:25–34).

In the western area, quarries are more evenly spread out and we can find different sites, all of which had a smaller production in comparison to Mayen (Mangartz 2006:25). Among those sites, Mount Ruderbüsch is without doubt one of the biggest and most intensively used (Hörter 1984:206–210, 1994:96–101, Nortmann...
The stone, which is categorised by Tatjana Mirjam Gluhak (pers. comm.), as a basanite, doesn’t show the exceptionally high quality of the Mayen lava. It has fewer and larger pores (often up to a diameter of 3 mm) and significant inclusions of augite but, with its tough and homogeneous surface, it is very well suited to quern and millstone production in general.

The recent investigations at Mount Ruderbüsch began in 2007/2008, when a hobby archaeologist informed the professionals that a prehistoric production place for saddle querns was going to be destroyed by the large modern quarry. In 2008, quite a detailed excavation of a heap of stones of originally at least 25 to 40 metres (Fig. 2 and 3) was conducted by a team of archaeologists and non-professionals (under the auspices of the Trier Landesmuseum), encouraged and supported by the engineers and staff of the stone quarry company.
It seemed that the heap, which primarily consisted of production waste, contained no tools, but it was dateable due to a number of finds of Iron Age saddle querns in different stages of the manufacturing process. Some small prehistoric finds, such as ceramics and flint, were made as well, which do not contradict the Iron Age dating. After this area had been explored, the modern quarry began to expand and, in 2010, the company made a request, to extend its operations up to the mountain peak, where there had been quite a large number of medieval millstone quarries. The company was granted permission but on the condition that it would support and fund archaeological surveys and, if necessary, excavations as well. Much of the area into which the quarry expanded contained no observable historical remains. However, at the highest point of the slope, a small part of the medieval quarrying area was affected and had to be examined. Due to the topography of the site, it was decided to observe this area during the modern exploitation, while profiles and instructions for the quarry work followed archaeological principles.

During the two work periods, the entire mountain was divided into sections and a systematic survey was conducted. Unusual features were stripped of vegetation, the discovered remains were investigated and finds were recovered. In order to gather information on surface structures that could be indications of archaeological remains, and as a support for future investigations, negative features were recorded as well.

A more extensive excavation took place at the Iron Age stone heap. After the surface was uncovered (Fig. 2), it was divided into trenches, which were manually excavated as far as safety would permit (Fig. 3). This allowed as many profiles as possible to be observed and the finds to be recovered. On the upper part of the mountain’s slope, where the medieval quarrying area was affected by the modern quarry, three heaps of production waste were cut carefully using a hydraulic shovel and the medieval quarrying structures were observed. Aside from those intentional archaeological investigations, further opportunities, such as sondages by the modern stone quarry company, were pursued. In addition, forest storm damage was used for observations concerning the nature of the ground.

Along with the previously mentioned records, various stone concentrations could be observed and explored, two of which can be regarded as indications of Iron Age quern production activity (Fig. 4). Also remarkable, was a large clearance cairn in which a series of roughly formed saddle querns had been gathered with the other stones. The assemblage itself was much more recent, but provided important information on the former dimensions of the prehistoric working district.

Apart from the very few small finds, 16 Iron Age saddle querns and fragments of saddle querns were found in the large heap, in one of the areas of activity (Fig. 4), in the clearance cairn and also spread over the entire site. The absence of grooved hard rock axes is unusual. Such axes were found in great numbers at Mayen (Mangartz 2010:63‒121) and are common in many prehistoric quarries (Holtmeyer-Wild 2007:245‒246, Mangartz 2010:65). This is made even more remarkable because a small geological formation of hard basalt is located in the eastern slope of Mount Ruderbüsch. The medieval stone heaps contained no tools or other small finds at all. During the investigations, seven large millstones were found. Five of them originate from the medieval heaps, one was a single extraction and one a transferred find. They show different stages of completion, with and without perforations (Fig. 5).
The main importance of the site consists of the Iron Age remains. The large stone heap in situ and the production site, which hadn’t seemed to be used on a noticeable scale after the end of the Iron Age production, represent a unique record in this context (Fig. 2, 3 and 4). It is obvious that such a depository, which was exposed to its surroundings for a very long time, represents no closed association and it is, of course, possible that individual workpieces were produced here in later times as well. However, the shape and size of the flakes, as well as the lack of rotary querns or their distinct fragments, which should have been easily distinguishable by their round shape and perforation, contradict a more than occasional use of the site at a later date.

Surface finds and former surveys had pointed out that Mount Ruderbüsch is, in comparison to other find sites, one of the biggest Iron Age production sites in the region (Hörter 1994:96‒101). As a result of the detailed excavation, we can now get an indication of the specific output of such a fabrication site. Furthermore, the size of a larger Westeifel production site can thus be correlated with the known remains of the Iron Age production at the Mayen quarries (Mangartz 2006:26–28, 2008:32–48), as well as with other similar sites. Since the excavation of undisturbed extraction sites for Iron Age saddle querns has been extremely seldom until now, the find site itself is important in this respect as well. The types of the recovered querns (Fig. 4), as well as previous surface finds (Hörter 1994:97, Nortmann 2006:452, Fig. 151), correspond with the types 3b and 4, 5, 6, 7, 8 of the typology of saddle querns from the Mayen quarries (Fig. 6) (cf. Joachim 1985:359‒369, Holtmeyer-Wild 2000:24‒29, 2007:243‒245, Oesterwind & Wenzel 2012:338‒341). Therefore, a dating of the fabrication site to Hallstatt (ca. 750 to 475 BC) and the Early La Tène period (ca. 475 to 250 BC) seems plausible.

A dating of the medieval production can be attempted by the shape and size of the recovered millstones. The roughly formed pieces were designated to become millstones approximately 150 cm in diameter and 40 cm thick, and some of them show a ridge around their perforation (Fig. 5). Similar millstones preserved in the villages around Mount Ruderbüsch have been compared by Hörter (1994:98) to finds at the Mayen quarries from the 12th century.

It is remarkable how the site was exploited, both with regard to medieval and the Iron Age production. The material that was taken was often huge chunks of lava with dimensions suitable for cutting out millstones. The very large lava blocks that occur in compact assemblages at Mount Ruderbüsch, were split into the proper size, meaning that the exploitation was neither a real quarry nor a production from fitting and unfixed blocks, but something in between.
Throughout the entire work period at Mount Ruderbüsch, it became apparent how feasible investigations in quarries are (if destruction can’t be avoided), if an open cooperation between archaeology and modern industry is possible, not only during the digging and mining work, but already in the planning stages. The results will be presented in detail in a later publication.

Acknowledgements

Investigations in quarries are hardly ever realisable without a lot of help and volunteer work. Special thanks are due to the Trier Landesmuseum, the quarry company Rheinische Provinzial- Basalt- und Lavawerke, the Archaeology association Archäologischer Verein Gerolstein, as well as to all friends and colleagues, who have helped to make this project possible.

References


