Hüttenberg

What was the extent of use of this site by the Celts during the Third and Second Century?

What is Hüttenberg?

Hüttenberg is an Iron Age manufacturing site located in Carinthia, Austria, which is believed to have been occupied by the Celts since the Hallstatt period (800 BC - 600 BC) as well as during the late Le Tené period when the Romans took over the site (450 BC-1BC)

Why is it unique?

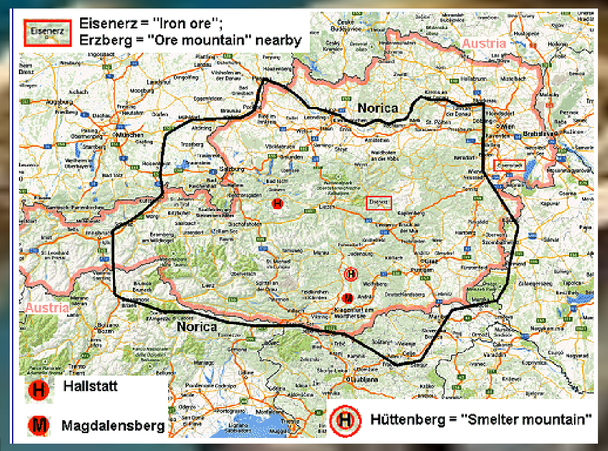
This site is unique due to it being a part of an old kingdom known as Noricum, which composed most of modern day Austria, linking it to another well known site, Hallstatt. In addition to this the site was also located near to Erzberg I ("Ore Mountain"), where the iron ore mined there is believed to have been used to create Ferrum Noricum or Noric steel. This steel has been the subject of praise from Roman sources including Ovid, a Roman Poet who lived from around 43 BC – 17/18 AD wrote “durior [...] ferro quod noricus excoquit ignis..” meaning “...harder than iron tempered by Noric fire... ”[1] as well as Pliny the Elder (23 AD– 79 AD) a famous Roman author who wrote "...the high quality of iron goods is ensured by the ore as in the Noricum”[1] . An analysis of iron artefacts which have been presumed to have originated from Hüttenburg by Vagn Buchwald shows that a relatively high concentration of Carbon as well as a low concentration of Phosphorus[2].

Craftsmanship of iron at Hüttenburg

Iron artefacts that have been confirmed to have come from Hüttenburg such as swords appear to follow the typical forging style that the Celts used known as cold working[2] which is “the plastic deformation of metals below the recrystallization temperature. In most cases, such cold forming is done at room temperature.”[7] this type of forging improves the blade by giving the final product improved strength properties such as a better resistance against general wear and tear in addition to a better finish in the metal[7] making it more aesthetically pleasing, with the addition of the high quality iron from Hüttenburg it made the blades that were made there very desirable. However this forging style had a few drawbacks such as the requirement of heavier equipment needing to be used and in the case of modern forging more powerful equipment meaning that forging took longer in addition to the metal also suffering from strain hardening[7] making the metal more brittle[8], increasing the risk of breakage, suggesting that the blades may have functioned as both a practical sword as well as a symbol of social status.

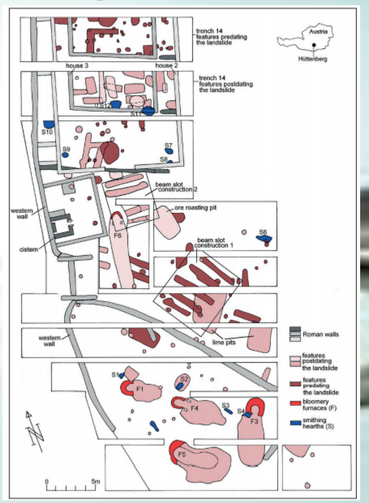
What is the evidence long term occupation?

Excavations at Hüttenberg, which are discussed by Brigitte Cech, show that several potsherds dating to the late La Tené period were recovered which suggests that there were occupational structures at the site,. In addition to this Brigitte Cech also states in a conference in 2008, that excavations showed “six furnaces and numerous hearths and other features”[5,6] which had been dated to 1st century BC, which shows that an Iron Age society used the resources that were available at the site. However the excavations also show that a landslide had occurred at the site, resulting in “dating of contexts predating the landslide is not possible on the basis of current evidence”[3] which may have destroyed any further evidence of occupation at the site during this time period.



Map to show the location of Huttenberg[1]

Map to show the central excavation of Hüttenberg 2003[3]



What is the evidence against long term occupation?

The ceramic potsherds that were recovered were the only domestic artefacts that had survived the archaeological record, which may suggest that there were occupational structures dating to the La Tené period. However due to the uncertainty of the other contexts before the landslide, it can be implied that the site was not permanently occupied or that Hüttenberg may have only used for the first stage of metal work, with the worked metal being moved to another site for further processing.

Conclusion

In conclusion I believe that there was temporary occupation of Hüttenberg with the Iron Age community using the area to exploit the resources through mining and smelting the iron ore. I believe they then took the resulting product to a secondary site in order to continue manufacturing until the finished product was produced.

Bibliography

1 https://www.tf.uni-kiel.de/matwis/amat/iss/kap_a/backbone/ra_3_1.html#Ferrum%20Noricum

2 Iron and steel in ancient times by Vagn Fabricius Buchwald

3 The production of ferrum Noricum at Hüttenberg, Austria – the results of archaeological excavations carried out from 2003 to 2010 at the site Semlach/Eisner. Monographies instrumentum 50, 2014 by Dr. Brigitte Cech

4 Metallography and Microstructure of Ancient and Historic Metals David Scott

5 HMSNEWS Historical Metallurgy Society 70 Winter 2008/9

6 The Early Iron in Europe conference, Hüttenberg, Austria, 8th–12th September 2008

7 https://www.totalmateria.com/page.aspx?ID=CheckArticle&site=kts&NM=266

8 https://www.nde-ed.org/EducationResources/CommunityCollege/Materials/Structure/strengthening.htm