

# Finding 1154 holes in the ground... and a riddle

July 16 2020, by Frid Kvalpskarmo Hansen

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Caroline Fredriksen gets results with the metal detector. Credit: Arne Anderson Stamnes, NTNU

You can say all kinds of things about cooking pits, but sensational they're

not. They're more what experts in the field might call an everyday archaeological discovery, if such a thing exists.

Cooking pits are the ovens of the past. They worked by lighting a fire in a pit that contained rocks. When the fire burned down to a smolder, meat and fish were put into the pit and covered, and the food was slow-cooked by the hot stones.

Cooking pits are one of the most common structures found during [archaeological investigations](#). They are useful, because by taking different samples from them, they can tell us something about when and how an area has been used. But coming across cooking pits doesn't exactly bring on that Indiana Jones big-discovery feeling for an archaeologist. Some archaeologists might even go so far as to say that cooking pits are pretty boring.

That is, until they aren't.

It was the night of 7 August 2018 that Caroline Fredriksen and Arne Anderson Stamnes, both archaeologists at the NTNU University Museum, realized that there was something very special about Løykja, in Sunndal municipality.

Metal-detector users had been submitting objects from the farmland here for several years. This led the county municipal archaeologists to take a closer look at the area. They found both cooking pits and an intact tomb, but hadn't come up with a clear picture of what went on at Løykja—and to what extent. That's what Caroline and Arne were trying to figure out this particular August night.





Running georadar at Løykja, where archaeologists and metal-detector users found a lot of excitement. Credit: Arne Andersson Stamnes, NTNU University Museum

"Rain was forecast for the next day, so we had to run the georadar until 2 a.m. to cover everything before the earth turned to mud," says Fredriksen.

Ground-penetrating radar (GPR), also called georadar, sends electromagnetic signals into the ground, and some of these signals are reflected back when they detect structures below the surface. This is how archaeologists get a kind of X-ray map of what lies two to three

meters below the ground.

The degree of image detail depends on the soil. At Løykja, the ground conditions are particularly well suited for such geophysical investigations. Even as the two archaeologists were driving back and forth across the site at 8 km per hour, they could clearly see the remains of long houses and burial tombs appearing on the screen. Not to mention cooking pits—hundreds of them.

"We immediately realized that this was something out of the ordinary. In the end, we counted a total of 1154 pits. It's pretty extraordinary!" said Fredriksen.



Buckle from Roman times, found by metal-detector user Steffen Hansen. Credit: Caroline Fredriksen, NTNU University Museum

## **Ritual gathering place?**

The insane number of cooking pits tells us that once upon a time a lot of people gathered at Løykja.

Probably they came here for special occasions, because pit cooking on this scale wasn't anything people would launch into following a regular workday.

The metal-detector findings indicate that the greatest amount of activity in the area took place from Roman to Merovingian times, from approximately year 0 to 750 CE. It is very common to find cooking pits in settlements from this period, but the archaeologists have so far only found the remains of two houses on the site. Then the question becomes: What did people do here—besides cook food?

"It's difficult to say for sure what went on here, but places with such a high concentration of cooking pits—and relatively few settlement traces—are often interpreted to be some form of ritual gathering place," says Fredriksen.





Field Meeting. Alf Harald Dragseth, Steffen Hansen, Bartek Nowakowski, Anders Danielsen, Anders Lippert and Caroline Fredriksen. Credit: Arne Anderson Stamnes, NTNU University Museum

"The name Løykja—from the Old Norse Leikr—also indicates that the site was an important social gathering place, perhaps in combination with trade or ritual activities. This seems likely, especially when viewed in the context of a large burial ground 200 meters southeast of the cooking pit area," Fredriksen says.

She adds that the 2018 investigations did not manage to delineate the whole cooking pit area, so it is probably much larger.



## Cooperating with metal-detector users

Private individuals carried out the search of the cooking pit site at Løykja through metal detecting. Experienced metal-detector users from all over the country cooperated with the archaeologists on a systematic search of the entire area following the georadar surveys.

"We have excellent cooperation with the metal-detecting community. They have a lot more expertise than we archaeologists do in how to use metal detectors. For example, they're able to tell what kind of metal they've found just from the sound the metal detector makes. I've learned everything I know about metal detecting from these people," says Fredriksen.

Everything from tweezers and spinning wheels to weights and hacksilver (currency) was found on the cooking pit site. The bulk of the artifacts stemmed from Roman times up to and including the Merovingian period.

"Among other things, we've found buckles from several different periods, which is a typical burial material, as well as hacksilver and production waste," says Fredriksen.

The objects do not give us the full answer to what exactly brought so many people to Løykja, but they do tell us that it was an area packed with human activity over a long period.

## What you need to know before you search

- You must always have the landowner's permission before searching an area.
- You should not search in archaeological and architectural

monuments and

- sites automatically protected by law.
- Searches should be done in the plow zone on cultivated land. Searching outside of cultivated areas is discouraged.
- Report any findings to the county municipality and use the Cultural Heritage discovery form (Funnskjema) for metal detection finds.
- Stop searching immediately if you think you have discovered an automatically preserved cultural heritage site.
- Link to the [guidelines](#) (in Norwegian) for metal-detector users.
- [Funnskjema](#)

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