

# RINGING STONES IN SWEDEN AND NORWAY

– Documentation and revitalization of a prehistoric and traditional sound tool

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This pilot project aims to make a survey of ringing stones in Sweden and Norway, collect traditional information about them and discuss their significance in ancient societies. Revitalizing of these music-archaeological artefacts is also an important part of the work. The project (2009–2010) is funded by The Foundation for Swedish-Norwegian Co-operation.

## RINGING STONES

As is well known, there are certain rocks, stone blocks and stone slabs, multiple or single, which produce a metallic or ringing sound when they are struck with a smaller stone. Such stones are found in several places around the world. Some of them are parts of local folk traditions and some might be linked to activities in prehistoric times. After the first discoveries of ringing stones *in situ* in Africa in the 1950s (Bernard Fagg, British archaeologist), more or less comprehensive documentation and research has been carried out worldwide about such stones.

No established terminology for such percussion instruments exists. Thus there is a disparate use of designations. Examples of terms found in specialist literature in English include *rock gong*, *ringing rock*, *bell rock*, *gong rock*, *rock drum*, *resonant rock*, *rock chimes*, *percussion boulder*, *resonant boulder*, *percussion plate*, *ringing slab*, *resonant stone*, *singing stone*, *sonorous stone*, *sound-ing stone*, *musical stone*, and *lithophone*. A common designation in German seems to be *Klangsteine*, in French *pierre sonore*. In Scandinavian languages the common term, also used in our project, is *klangsten*, translated into English as *ringing stone*.

Ringling stones in Scandinavia were for a long time a neglected field of research. They were mentioned and discussed by some archaeologists in the 20th century, but no systematic research was carried out until after the year 2000. This was done at the University of Uppsala, Sweden, by dr. Helena Victor, and by some archaeology students. One of the students, Maja Hultman, has made comprehensive contextual and archaeoacoustic analyses of ringing stones on the Swedish island of Öland. In Norway there has been no research on this topic.

Since we started our Swedish-Norwegian collaboration project (2009), we can provisionally now identify forty-two ringing stones in Sweden and twenty in Norway. The record is based on data in ethnological, literary and archaeological sources as well as our own inventories.

## ACOUSTIC FUNCTION

An interesting question is why some stones are “sonorous”, i.e. sound metallic and can thus be called ringing stones, while similar stones are mute. We have taken up this question with several geologists, but they have so far not been able to give any unanimous explanation of this phenomenon. From a geological point of view, ringing stones should not be confused with the species of rock called “phonolite”.

Several, probably most, of the ringing stones are placed on one or several smaller stones. There are many issues connected to this phenomenon. Have they been propped up by prehistoric humans to avoid damping, deliberately reinforcing the sound of the stone as an acoustic refinement? Does this at all have an influence on the ringing stone’s physical potential as a sound tool? Is it really true that stones resonate better when they are placed on a bed of smaller stones?

We should not exclude the possibility that stone blocks supported by smaller stones is a natural phenomenon, resulting from the melting away and receding of the Last Great Ice. Heavy frozen-fast boulders then sank down and were positioned on top of the layers of light sand and gravel with streaks of larger and smaller stones.

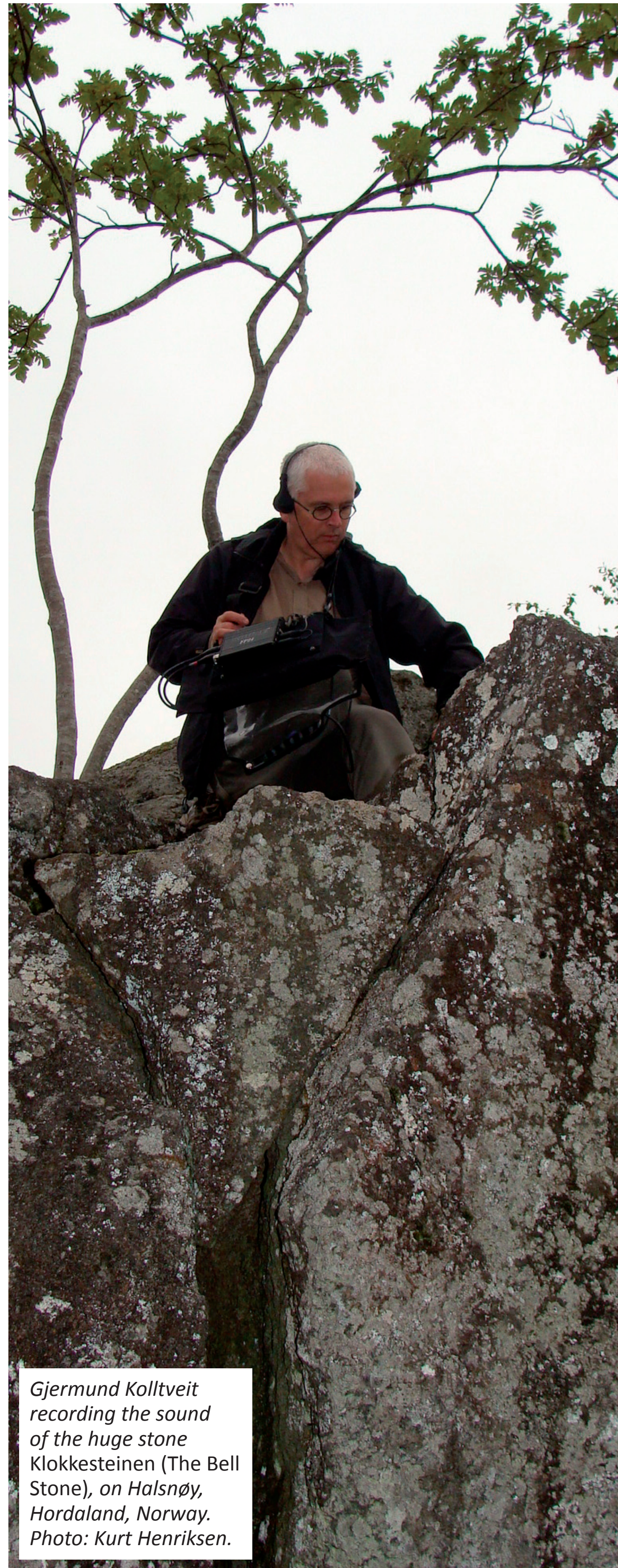
The data does not allow us to understand the significance of stones placed on top of smaller supporting stones. However, the Swedish archaeologist Maja Hultman has done some experiments to determine the acoustic function of such stones. Her preliminary conclusion is that this phenomenon does not have a decisive role for the sound potential of ringing stones.

## TRADITION AND FOLKLORE

Folk tradition in Scandinavia offers much information on both stone slabs and blocks being used as percussion instruments because of their metallic sound when struck. Their traditional names are quite often onomatopoeic or refer to bells or singing, such as *Klokkesteinen* (The Bell Stone), *Sangsteinen* (The Song Stone), *Syngesteinen* (The Singing Stone), *Klingastenen* (The Sonorous Stone), *Klunghal-len* (The Sonorous Slab), *Ballerstenen* (from Old Swedish *ballra*, making noise), *Dønnsteinen* (From Old Norse *dynja*, making sound).

Some of these stones with a position in folk tradition cannot be linked to prehistoric contexts. At other times, however, a connection to ancient activities might be indicated when the tradition insists that a stone has its roots back to pagan times. Furthermore, stones might be connected to prehistory in a more direct way, for example with the presence of cup marks.

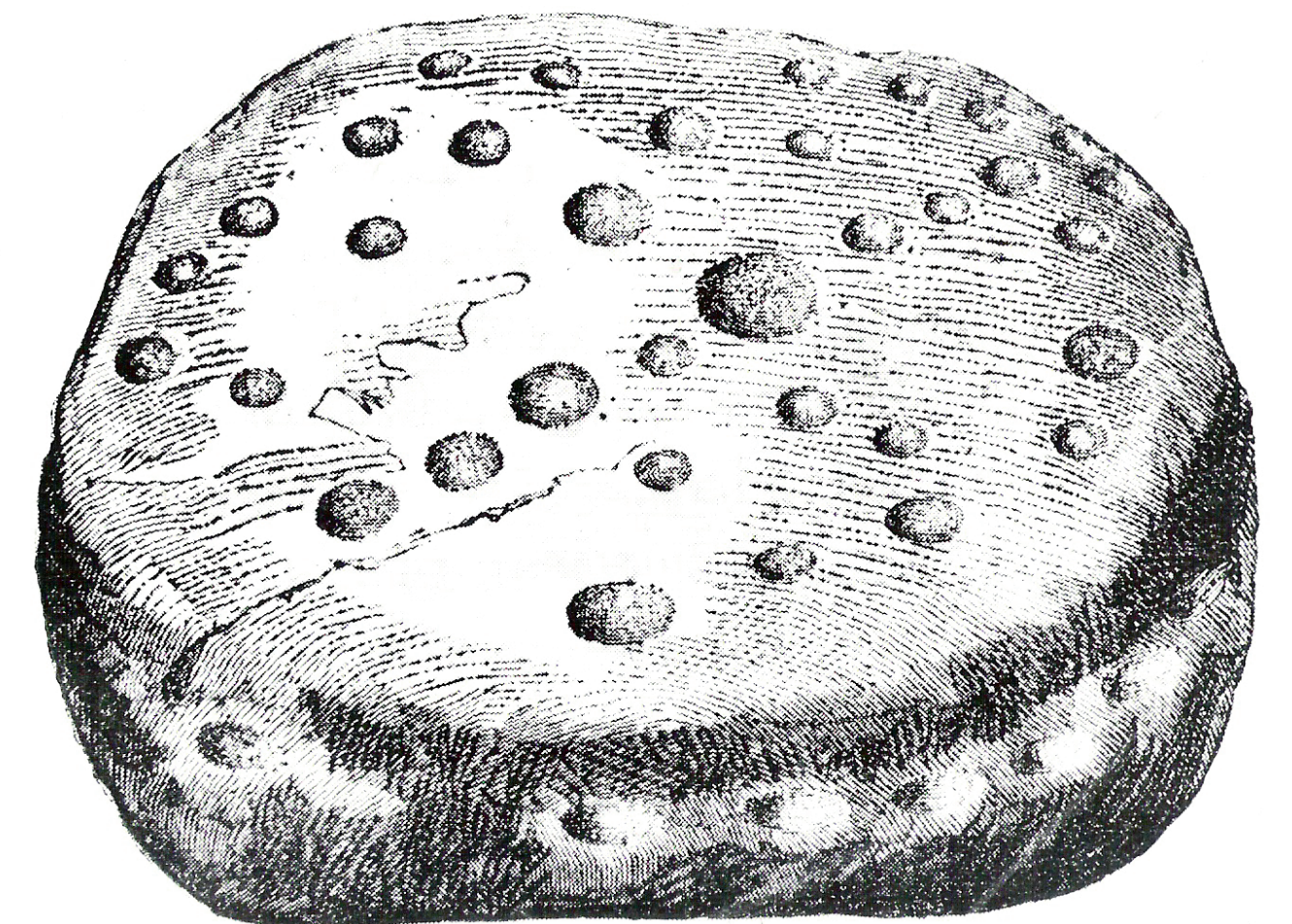
A cup mark, the type of rock carving found on most ringing stones, is a cup-formed depression that has been carved into mountain slabs and boulders. It is as a rule 3–10 cm in diameter and up to 5 cm in depth. The cup marks are thought to date from such an extended period of time as that between the late Stone Age and the late Iron Age. If we let the cup marks constitute the criterion for dating the ringing stones it will be a broad dating.



Gjermund Kolltveit recording the sound of the huge stone *Klokkesteinen* (The Bell Stone), on *Halsnøy*, *Hordaland*, Norway. Photo: Kurt Henriksen.

In Swedish popular belief cup marks are usually called *älvkvarnar* (*älv*, *älva*, in Swedish, means elf, and *kvarn* means windmill). There are here a great many tales and legends, and even today there are transmitters of tradition still alive who can tell about how the cup marks were used in former times. According to these beliefs, the cup marks were, to exemplify, bowls for offerings in connection with fertility and death cults, symbols of the earth goddess (the carving of the cavities was to symbolize the union of the earth goddess with the god in heaven), or they were made by shamans of the Bronze Age and the stone was a kind of “shaman drum”.

Perhaps it was the case in prehistoric times that cup marks were used to indicate that a stone was a sound tool, that is a ringing stone, and/or they were signs to tell where the sounds were the “best”, for certain purposes. Was any intrinsic value of a magical/ritual nature possibly attributed to the sounds that were caused by the manufacturing processes, and/or to the fact that the stones were sonorous? Maybe the making of cup marks was a resounding way to communicate with someone or something that was supposed to be inside the stones, such as the spirits of the ancestors, an idea discussed by the Swedish archaeologist Helena Viktor. Or perhaps cup marks told people that here is a ringing stone for signalling, please ring the “bell”!



*Ballerstenen*, *Västergötland*, Sweden. (The Swedish word *baller* can be translated as noise.) This ringing stone has numerous cup marks. In popular belief it was supposed to have been used as a sacrificial altar during heathen times. Width ca 180–210 cm, height ca 90 cm. (Anonymous drawing)



Ringling stone at *Fole* on *Gotland*, Sweden, known as the *Gyllenstainen* (The Golden Stone). This stone was split in two halves in the 19th century by people who believed that it contained gold and that this precious metal caused the ringing sound. Width ca 200 cm, height ca 85 cm. Photo: Arne Philip.



*Fårö Ringing Stone* on *Fårö*, *Gotland*, Sweden. Width ca 110 cm. Photo: Arne Philip.



# RINGING STONES IN SWEDEN AND NORWAY

## WHO, WHEN, WHY?

- Who performed the ringing stones and for whom did they do it?
- Were they used together with other sound tools and vocal sounds, as well as dancing?
- Could anybody see and hear the ringing stones or were they reserved for a special group in the society?
- How far away were the ringing stones audible – or meant to be audible?
- Did the range of the sound indicate territorial boundaries of any kind?
- Were the ringing stones so sacred and/or even taboo that they could not be used by any person, at any time, in any way?
- Did both the ringing stone and its sounds signify something in a larger, complex “cosmological” system, in which sound was of less importance than the actual signs – the stones and/or the cup marks?

There are a few facts but many questions regarding ringing stones in prehistoric societies. All questions, however, of how and what, who, for whom, etc. bring us down to the essential problem: why and in what context were the ringing stones used?

It is unlikely that ringing stones served purely practical functions. They produce weak sounds, compared to other sound tools, as well as the human voice. It is more reasonable that these stones were used on special occasions with a specific purpose.

In her contextual study from 2007 Maja Hultman concludes that prehistoric people seems to have preferred to put up some of their constructions close to the ringing stones, that is, the stones had some kind of closer relation to the rest of the cultural landscape. Moreover, she finds that ringing stones were consciously placed close to communication routes in the landscape and mentions a recent theory that the ringing stones were possibly used like the Greek herms and the Swedish *offerkast* where travellers plead with different kinds of higher beings to ask for good luck during the journey.

## CLASSIFICATION

All stones make sound when they are struck. Some stones, however, produce more or better sound than others. We can never prove that a stone, with good or less good sound, has been used in prehistory with the primary purpose of creating sound. To sort this mixed material, we suggest this classification.



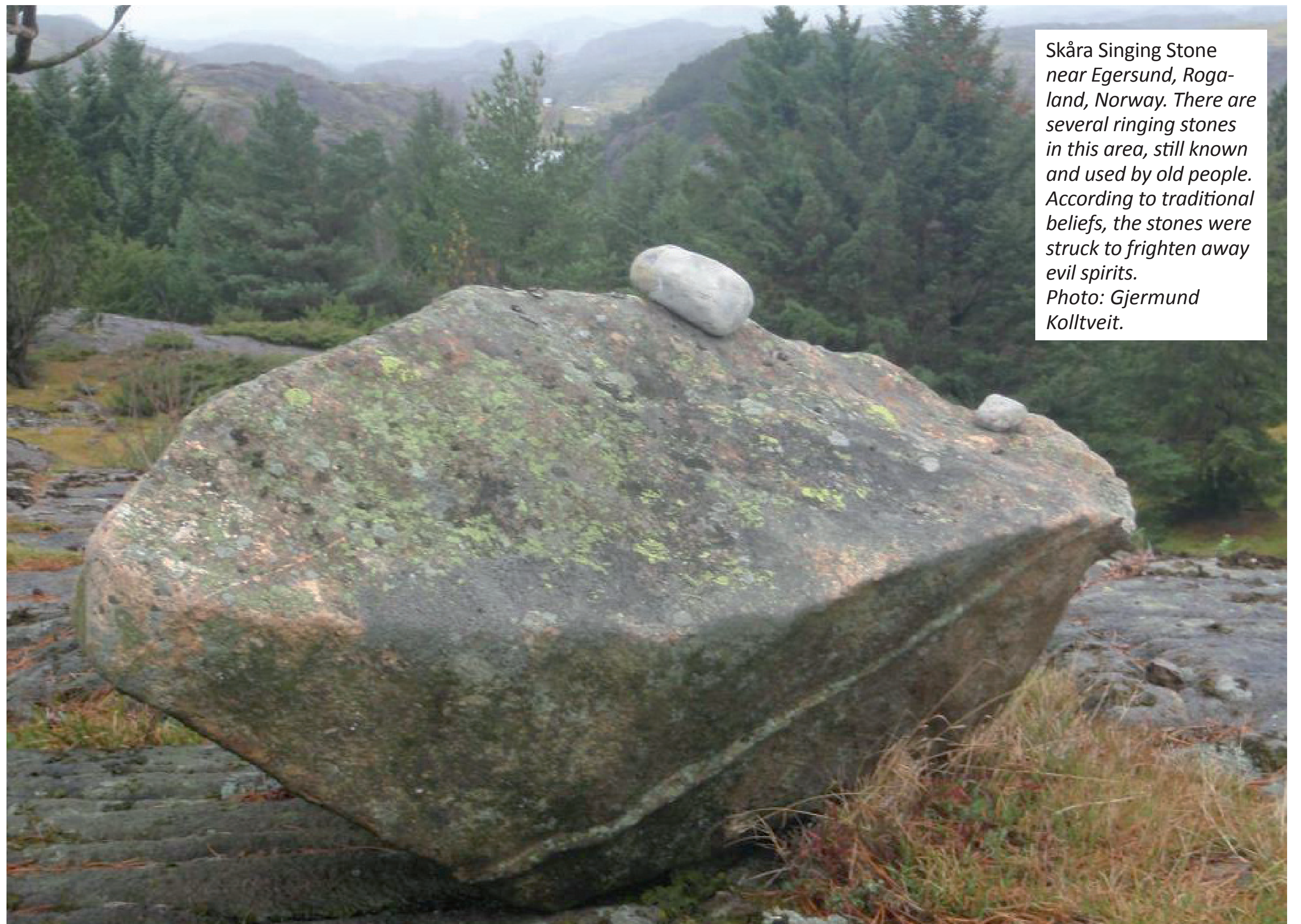
## RINGING STONES IN CONTEMPORARY MUSIC

A special kind of ringing stones are those used in modern music and art and come in countless forms, designs and sizes in large parts of the world. They are sculpted and used for, e.g., modern serious music and to accompany ballet and other forms of dance, in interactive installations, for experimental sound art, sound sculptures, happenings, workshops, pedagogical purposes, etc. These modern ringing stones often make up both percussion and stage sets, i.e. they are important visually as well as aurally.

Among recent examples from Scandinavia is a concert in Gothenburg (2008) where two pavers from a street firm played on various stones of diabase, marble and granite. The pavers were responsible for the rhythm and sound, together with two percussionists, while a composer at a synth took samples and looped certain sections of the concert. Another example from the same year is the opening ceremony of the Norwegian Opera in Oslo, where percussionists from the Opera Orchestra played on some of the Italian marble slabs used on the opera house facade.



Offerings at the Sangelstainen, drawing of a fictive scene. Drawing: Ulla Sjöswärd.



Skåra Singing Stone near Egersund, Rogaland, Norway. There are several ringing stones in this area, still known and used by old people. According to traditional beliefs, the stones were struck to frighten away evil spirits. Photo: Gjermund Kolltveit.



The Sangelstainen on Gotland, Sweden, is mentioned in legend and in popular tradition as an ancient heathen altar or sacrificial stone. There is also a story about a Christian king from Norway who in 1038 was on Gotland trying to Christianize the pagan people there by fighting out a battle against them. Before the fight he knelt on the Sangelstainen and prayed. His pray was so strong that cup marks were made where he had placed his knees and elbows. Width ca 200 cm, height ca 90 cm. Photo: Arne Philip.

## REVITALIZATION

In Sweden and Norway, ringing stones are relatively unknown as a phenomenon to the general public, scholars, musicians, schools and children. One of the next steps of our project will be to make known and bring to life for children as well as adults, scientists as well as laymen, ringing stones in Scandinavia on the basis of a documentation of them in sound, words and images.

In collaboration with musicians, archaeologists and the official authorities of cultural heritage, we will demonstrate the sounding possibilities of the ringing stones in various ways, from educational programmes at the sites in question (e.g. sounding lectures and sound happenings) to multimedia music programmes (e.g. TV documentaries, school material, etc.).

**Cajsa S. Lund** is a music archaeologist, primarily connected to the University of Lund in southern Sweden. Her profile is to make the results of her research come alive for the general public. She is also a music producer and has in particular formed Ensemble Mare Balticum, which is the regional institution Musik i Syd's ensemble for early music.

**Gjermund Kolltveit** is a free-lance music archaeologist, ethnomusicologist and musician, living outside Oslo. His doctoral dissertation Jew's Harps in European Archaeology is about the early history of the jew's harp in Europe based on archaeological materials. Music-archaeological activities through his website [www.musark.no](http://www.musark.no).

# LISTEN!

Listen to the Sangelstain on Gotland. It was recorded in 1984 for the phonogram The Sounds of Prehistoric Scandinavia. Press play on the MP3 player to start.