

The archaeological record of the origin of music

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This paper briefly addresses the history of research on early musical instruments before presenting the record of Paleolithic musical instruments from the Swabian Jura of southwestern Germany. The caves of the Swabian Jura have a long history of research extending back to the 1860s, and since that time generations of prehistorians have focused their attention on the many caves of the Ach and Lone valleys, where many caves have long stratigraphic sequences and excellent preservation of organic artifacts. Decades of excavating the rich archaeological deposits from sites including Bockstein, Hohlenstein and Vogelherd in the Lone Valley and Geißenklösterle, Sirgenstein and Hohle Fels in the Ach Valley yielded rich finds from the Middle Paleolithic and all the major phases of the region's Upper Paleolithic.

Despite this long history of archaeology in the region, it was not until 1995 that researchers published the first musical instruments. Susanne Münzel spotted and refitted the first two flutes made from swan radii while analyzing faunal remains from Joachim Hahn's excavation in Aurignacian layers at Geißenklösterle. Subsequently, Maria Malina identified and refitted numerous fragments of a flute made from mammoth ivory published in 2004. This discovery came as a shock to archaeologist, because ivory flutes are much harder to carve and assemble than flutes made from hollow bird bones.

Since knowing how to identify Aurignacian flutes, my excavations have recovered numerous fragments of flutes at Hohle Fels, located a couple kilometers upstream from Geißenklösterle in the Ach Valley, and from Vogelherd Cave in the Lone Valley. While researchers long considered Paleolithic flutes to be rare, every modern excavation in Aurignacian deposits in caves of the Swabian Jura has yielded multiple examples of bone and ivory flutes. These flutes are typically found in small fragments that are easy to overlook without skilled archaeologist carefully sorting the countless small fragments of material recovered during waterscreening.

The discovery of a nearly complete five-holed flute carved from a radius of a griffon vulture from the basal Aurignacian of Hohle in 2008 represents an exceptional circumstance. The occasional recovery of isolated fragments of bone and ivory flutes reflects the more typical situation at the ongoing digs at Hohle Fels and in the backdirt from the 1931 excavation at Vogelherd. Identifying and trying to refit these fragments corresponds to a herculean task that will keep archaeologist busy for decades. This paper reports the state of research on the Aurignacian flutes from Geißenklösterle, Hohle Fels and Vogelherd and discusses the implication of this well-documented musical tradition, which dates to about 40,000 years ago.