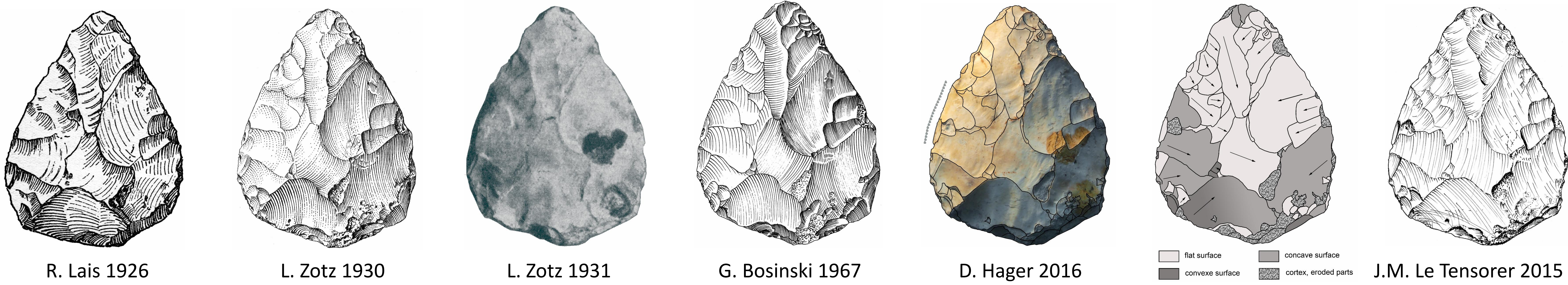


New Results for the Biface from Bad Säcking, Flühwäldchen, Baden-Württemberg

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Research History

A peculiar stone with the shape of a heart caught the attention of a young girl in 1916. She picked it up from a pile of stones assembled next to a vegetable garden. In the early 1920s, Emil Gersbach recognized the piece as a palaeolithic biface. From the beginning however, doubts were raised as to the source of the raw material and as to the unstratified position on a geomorphological ‘Lower Terrace’ of the High Rhine River northwest of Bad Säcking at Flühwäldchen and Weihermatten.

Raw Material from Local Source

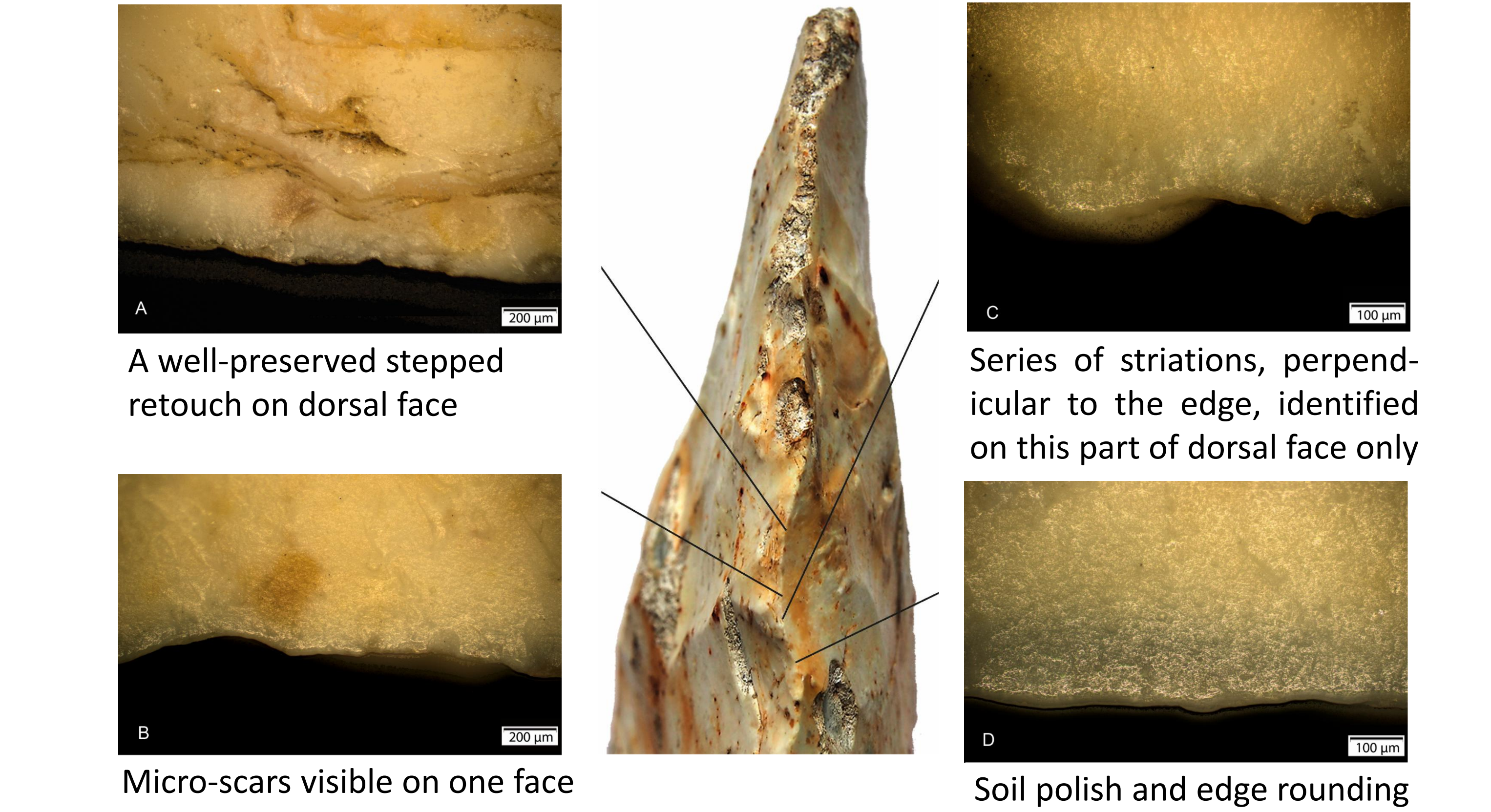


A new analysis reveals that the raw material of the biface is a siliclastic rock which develops under terrestrial conditions of a dry and tropical climate. The sedimentary environment reflects a salt pan or a sebkha. Such a silcrete can be traced to local sources in the Buntsandstein (i.e. the ‘Karneol-horizont’).



Because the cortex on the base of the biface is morphologically fresh and shows no marks of a torrential deposition, one must assume that the raw block was collected very near to a *primary* outcrop. Buntsandstein occurs as close as 4 km northeast of the find spot.

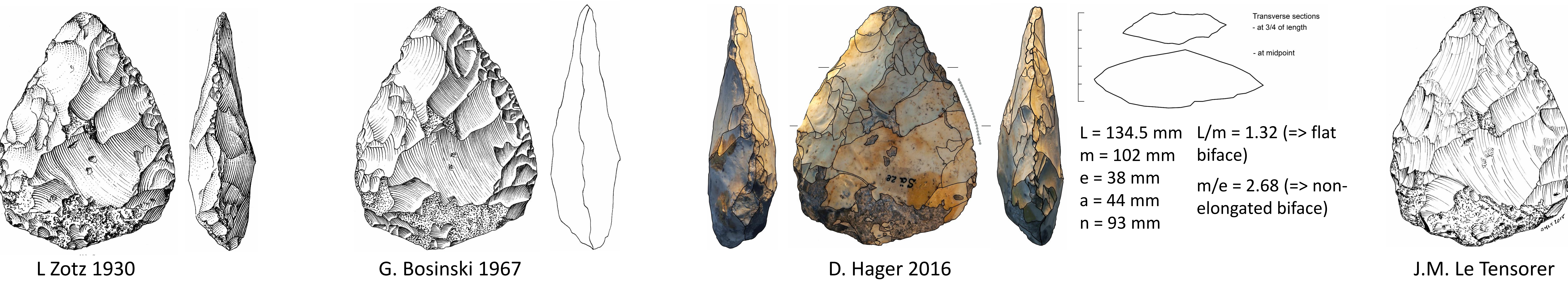
A *microwear analysis* of the preserved edge was successful, despite of a heavy patina, and a partial coverage by soil polish.



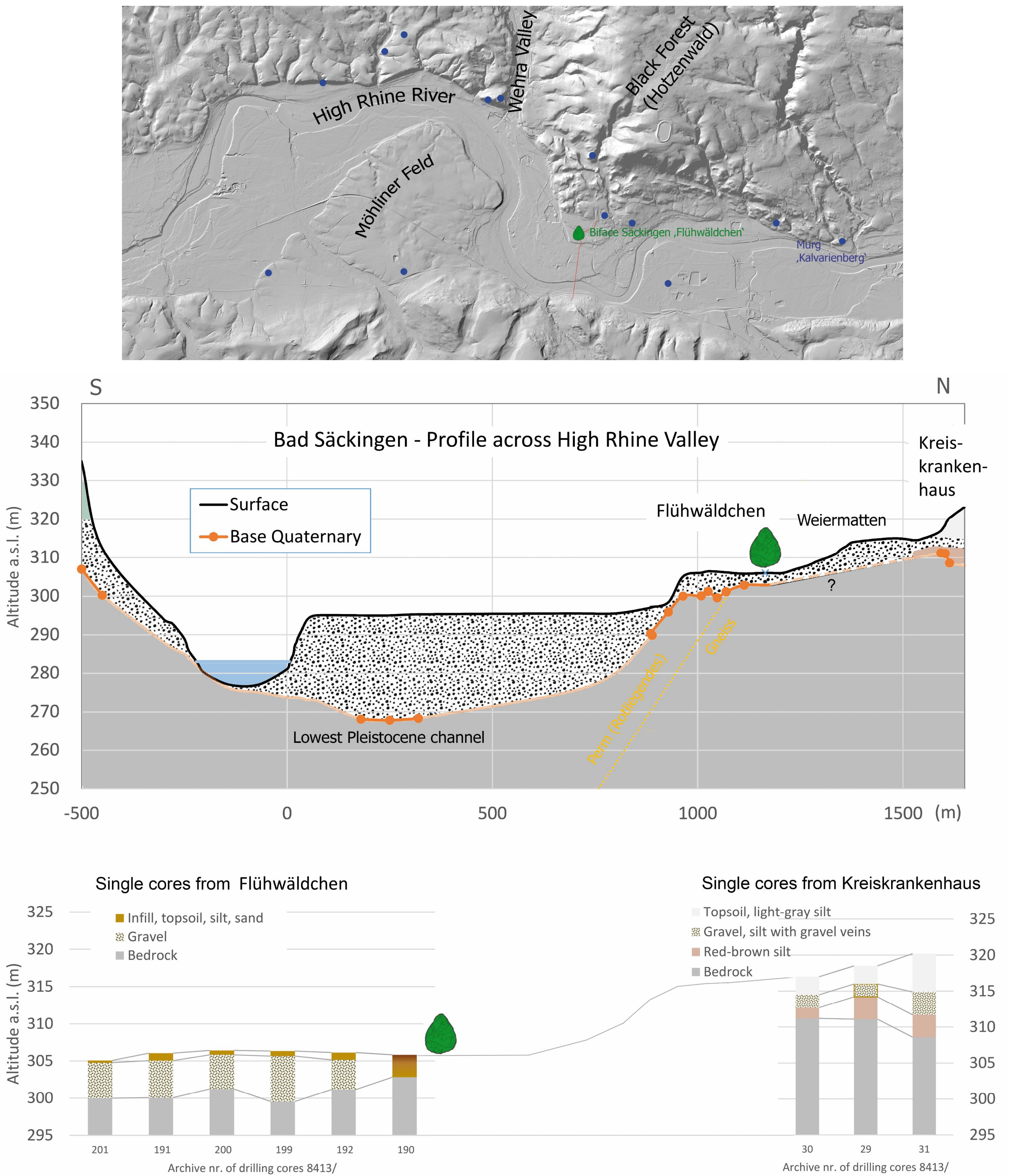
Chronology

The biface from Bad Säcking, Flühwäldchen is a flat, almost symmetrical biface with two convex edges. It is shaped by deep and invasive removals which cover both faces. According to the *morphotype* and *size* the cordiform biface is attributed to the ‘Upper/ Final Acheulean’ - older than 60 ka.

A maximum age of the biface can be derived from the time when a last glacier reached the find spot on the ‘Lower Terrace’ at 306 m a.s.l. The ‘terrace’ is in fact a promontory



of the southern Black Forest which is covered by a few meters of quaternary deposits (3 to 7 m towards its edge). During the Penultimate Glaciation or 150 ka ago, an arm of the Black Forest glacier reached the Möhlener Feld (‘Zeiningen advance’) and may have also covered the promontory of the southern Black Forest. At higher altitudes (above 350 m a.s.l.) it shows deep subglacial and lateral drainage channels.



The promontory must have been accessible during the Last Interglacial, and later, until a braided river plain started to accumulate 27 ka ago. The biface may either have been left and embedded *in situ* or originate from a higher altitude (above 314 m a.s.l.). After deposition of the biface, a tufaceous layer on its cortex formed in a loose sediment, alternating between wet and dry stages. A very strong patina developed during exposure on the surface. By processes of solifluction the biface may have been moved after the LGM over a distance of 250 m or more from a higher altitude to the location where it was found 100 years ago.

