

*The men's needs: pebble tools, rough or retouched debitage products, retouched cores*

In the three assemblages, several functional blanks were used by humans: micro pebble tools (15-60 mm), some large pebble tools (100-240 mm for Kůlna for example), flaking products, tools on flaking products or cores and whole pebbles (hammers or raw material stock?). Most of them are, however, rough flakes. Men obtained what they needed, using different methods: by a shaping system, which however stays on a very small scale and not easy to distinguish from flaking (both tool and core along their life, fig. 6.), and by a main debitage system, which gives flakes and even cores like blanks.

Some specific types of flakes were produced by the tool-makers. However, they were less demanding. Numerous broken flakes were used. This low degree of demand probably depended on the kinds of stones used, like quartzite or quartz which easily break themselves, but not always.

- The products are very small, in the majority of the cases less than 30 mm (more than 80% less than 10-15 mm), but there are also large flakes up to 80 mm. The fine-grained stone flakes seem to be mainly small (perhaps for its stone quality, for a micro debitage or their needs). However, Taubach artefacts are in general longer (20 to 50 mm) (fig. 7-8.).
- The flakes are, in general, similar for all the kinds of raw material, short, thick and wide. The shapes are various; even the rectangular and triangular morphologies (parallel edges) are more numerous for fine-grained stones than for quartzite and quartz. Some laminar flakes are also present, especially in silicites in Kůlna and Tata (bladelets).
- Between 25 and 50% of the flakes have a back (cortical or not), sometimes even two opposite backs. A debitage break could have been perceived like a debitage back (these flakes were used or retouched like entire flakes). It is possible that the wide and thick platforms could also have been perceived like a back.

Retouched artefacts make up less than 10% of the assemblage (fig. 9.). Most of the tools are side-scrapers and partially retouched points. The equipment is then limited in category. Retouches were made on flakes of all size. However, humans used the shape diversity of the flakes for the retouch. Triangular flakes or blanks with two convergent edges are used first for making points. The edges are either entirely retouched or partially retouched. Quartzite and fine-grained stone flakes are more often retouched on a long part of the available sharp side. The longest edge is chosen first for the side-scrapers. The retouches are, in general, opposite to the back, when it exists, or even to the platform. A back could have been retouched or used, especially when they were two on a piece.

The retouch does not, therefore, really change the flake shape in most of the cases. The retouch is simple and thin in general, more invasive on orthoquartzite in Kůlna. It is often small and steep on silicites, radiolarites and flint. Some silicite tools seem to have been used for a long time or the work is tidy on this kind of stone. Several series of retouches are indeed visible (due perhaps to a long utilisation or a reshap-