



## Polished stone artefacts from Sopot culture site Samatovci in Slavonia region

JACQUELINE BALEN<sup>1</sup>, DRAŽEN KURTANJEK<sup>2</sup> & DRAŽEN BALEN<sup>3</sup>

<sup>1</sup>Archaeological Museum in Zagreb, Zrinski Square 19, 10000 Zagreb, Croatia

<sup>2</sup>Department of Mineralogy and Petrology, Faculty of Sciences, Horvatovac 3, 10000 Zagreb, Croatia

<sup>3</sup>Department of Geology, Faculty of Sciences, Horvatovac 3, 10000 Zagreb, Croatia

The site of Samatovci is located 15 km west of Osijek in Eastern Slavonia. The finds kept in Archaeological Museum in Zagreb were uncovered during the vineyard cultivation between 1895 and 1906. The circumstances of discovery suggest the artefacts were collected from the topsoil. At the same occasion a limited trench excavation took place. However, it was done by people lacking professional archaeological skills, which left us with no preserved documentation. It is rather difficult to give any reliable information concerning the layout of the settlement because most of it had been destroyed through land cultivation and house building. The terrain configuration indicates a hillfort surrounded by a ditch, with a nearby stream whose dried up bed is still visible today. The collected pottery can be attributed to the I-B, II and III phase of Sopot culture. Furthermore, there are several sherds belonging to the Copper Age cultures of Kostolac and Vučedol.

Apart from large quantity of pottery, Samatovci also produced numerous stone artefacts. Although the lack of stratigraphic relations poses grave limits to the scope of scientifically obtainable inferences, Samatovci remains the site with the greatest number of stone artefacts belonging to the Sopot culture in Croatia. Unfortunately, in Croatia so far there have been no systematic studies of lithic material that would, on the basis of the raw materials analyses, typology and functional analyses, produce any significant results regarding this aspect of production of Neolithic people.

Stone tools from Samatovci can basically be divided into the following categories: chipped, ground and polished stone tools. The chipped stone artefacts number several thousands in total but as we already mentioned, without reference to their stratigraphic position. Many cores were found, flakes and a high number of blades and end-scrapers. Side scrapers and borers are represented in small numbers. Approximately forty arrowheads have been identified. It deserves mention that the site produced high quantities of obsidian artefacts, e.g. flakes, bladelets and cores for bladelets.

There were many examples of ground tools among the stone assemblage. Depending on their possible function, we divided them into pestles/hammerstones, handstones and quern-stones. Conspicuous within the assemblage are pieces resembling ordinary pebbles but which were pur-

posefully brought to the site, although their function remains unknown.

The polished tools consist of worn, re-cycled or broken pieces of cutting-edged tools, namely small adzes or axes – shoe-last and trapezoidal flat types. Most common type is also shaft-hole axe. There are few fragments of cylindrical cores, the by-products of shaft-holes drilling, which together with numerous unfinished tools indicates that the tool production was carried out within the settlement.

Samples of polished stone artefacts were analyzed mainly as a whole rock by non-destructive optical methods using binocular microscope combined with various tests (solubility, hardness, and specific gravity). Some broken artifact tools are analyzed as thin sections with polarizing microscope.

Altogether 39 whole or damaged shaft-hole axes have been identified. The preferred rock types were amphibolite (16 examples), gabbro (5 pieces) and basalt (3). Andesite, metagabbro, metabasalt, sandstone and serpentinite served as a material for two axes each.

Small adzes and axes are mostly made of sandstone and chert, common are tuff, alunite, amphibolite, diorite and serpentinite.

Potential sources of materials could be found in the vicinity of Samatovci as gravel deposits of the Drava and Sava rivers, which may have been transported from the Alps.

The high quantity of lithic assemblage from Samatovci, ranging from pebbles, cores and finished tools to waste material, gives strong indication that the prehistoric settlement also served the function of a production center for lithic industry.

### References

- Brkić M. & Galović I. & Buzaljko R., 1989: Tumač Osnovne geološke karte 1:100 000, list Vinkovci. Geološki zavod Zagreb & Geoinženjering, Sarajevo, 49.
- Dimitrijević S., 1968: Sopotsko-lendelska kultura, Zagreb.
- Drechsler-Bižić R., 1956: Samatovci - neolitsko naselje kod Osijeka, Zbornik za društvene nauke 12, Novi Sad, 17-38.
- Galović I., Marković S. & Magdalenić Z., 1981: Tumač Osnovne geološke karte 1:100 000, list Virovitica. Institut za geološka istraživanja, Zagreb, 44.
- Šparica M., Buzaljko R. & Pavelić D., 1987: Tumač Osnovne geološke karte 1:100 000, list Slavonski Brod. Geološki zavod, Zagreb, 56.