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CRAFTER: Re-creating Vatin Pottery

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An attempt to re-create pottery of the Vatin culture has been made within the Crafter project (Crafting Europe in the Bronze Age and Today), whose aim is to help revive modern-day artisanship by drawing inspiration from Bronze Age pottery of four European Bronze Age societies: El Argar (Spain), Únětice (Central Europe), Füzesabony (eastern Hungary) and Vatin (Serbia). This experimental work has been made by a team of The Museum at Paraćin, Serbia,

is one of members of the project, and presented experimental archaeology results at the recent CRAFTER workshop held in in Mula, Spain, between 29th to 30th 2018, an event which gathered 30 specialists as part of a project programme (for more details see: https://exarc.net/history/meeting-potters-and-archaeologists).

> The final results show that the experimentally made vessels are almost identical to those found within the original archaeological context.

The Bronze Age Vatin culture has been known in archaeology as a cultural phenomenon distinguished by a specific material culture which existed between c. 2200 to 1600 B.C. in the region of the southern part of the Panonnian Plain and the area along the lower Sava river and south of the Danube river. The Vatin culture followed Early Bronze Age cultures in the region, indicating stabilization in this area after the disintegration of the Aeneolithic Vučedol culture by tribes from Russian steppe (Garašanin 1979, p. 504; cf. Ljuština 2012, pp.148 – 157; Gogâltan 2017, p.32, Fig. 3).

This experimental test presented the technology of Vatin pottery production in seven steps, with associated tools made of various materials which were used in this process. (See Figure 1). By these means, we have re-created several Vatin dishes.

1. **Clay preparation**. This included removal of organic impurities and large particles, and mixing clay with temper. We mixed 50 % of industrial fine clay with 50% of quartz sand. This ratio allows vessels to resist thermo-shock during firing and has been applied according to a recipe of pottery production in the village of Zlakusa, western Serbia (Djordjević 2016, p.128).
2. **Kneading** results in uniform plasticity and an extrusion of air, which, if present during firing can cause cracks (See Figure 2).
3. **Modelling of the vessel**. Small vessels, such as the beakers of the Vatin culture, are made from clay balls. At the beginning of this process, the bottom of the vessel was formed by a circular movement of a hand (See Figure 3). Having reached basic a height, the vessel was roughly made with thicker walls. This was followed by gradual thinning of the inner walls by fingers or tools to form the upper part of the vessel. Finally, the surface was evened using fingers, stone, bone tool and/or wet wool. Handles were then made of clay bands, which were already decorated by hand. They were attached to the surface of the vessel (See Figure 4). This produced a large contact surface enabling better adhesion of the handle to the vessel. Contact placement can be evened out using water, fingers or wool. Additionally, the surface had been evened by manipulation using a rib of a large mammal, while the vessel was rotating (See Figure 5).
4. **Channelling** presents the process of making plastic ‘ribs’ on the vessel by impressing the channels into the surface using fingers, small pebbles with appropriate shapes or a river shell.

5. **Smoothing**. The sandy temper we used required coating the surface of the vessel with an extra layer of fine clay mixed with water before smoothing and refining. This enabled smoothing to an even surface due to the content of sand grains. The prepared vessel was dried in a windy place without direct sunlight. Furthermore, the surface was evened manually, and then smoothed using a boar task. As the shine appeared, the surface was smoothed using wet wool with minimal pressure. Wool was also used to control the level moisture on the surface of the vessel. This suggests that surplus moisture can be absorbed and removed, while a lack of it can be compensated by additional soaking of the surface using sodden wool.
6. **Decoration** included the use of various techniques and tools. Incision of the vessel was applied after the first surface smoothing using a sharp tool and short movements due to clay temper. In the next step the lines were deepened. We also implemented clay stamps (See Figure 6), which were used to impress motifs like those on Vatin pottery. However, no archaeological context has yet produced such an items, as it is likely that they were made of fragile and perishable materials. a Unio sp. shell has were used to create curved motifs on the pottery (See Figure 7).
7. **Drying and firing**. These are very important processes during which in this experiment, water is removed from the prepared object, while avoiding cracking the vessels during their firing. This was performed in three steps.
    - In the first step the vessels were dried for about ten days. In order to avoid a separation of the fused parts, the vessels were not exposed to the sun and air currents on the first day.
    - In the next step, vessels were placed around a fire, and exposed different side to heat from time to time and gradually move closer to fire (See Figure 8). The temperature reached about 400 Celsius.
    - In the final step, the temperature of the fire was increased and vessels, placed around fire, changed colour. A test vessel was placed in among the embers, when the fire decreased in heat. Absence of cracks on the object indicated that an accurate temperature was achieved and that the vessels were indeed dried. This meant increasing the fire and beginning the process of firing of the vessels to last through until their red heat (See Figure 9).

In order to achieve a black surface on the pots (See Figure 11), we implemented the Japanese raku technique. This means that a candescent item has been removed from fire, covered by straw and isolated from air influence for few minutes (See Figure 10). Considering that this method of vessel colouring might produce burned toxic materials, the pot was submerged into water in order to remove them from the surface.

The final results show that the experimentally made vessels are almost identical to those found within the original archaeological context. However, while their visual appearance bears a very close resemblance to the originals, the observable differences are caused by the selection of the temper, which required an additional layer of clay mixed with water over the surface before smoothing and refining. This was likely impacted by a lack of the results of the chemical and physical analysis of Vatin pottery. Thus, we believe that the convergence of the unique physical and chemical characteristics of the original content of Vatin pottery may impact partly on the actual process of pottery making.

Keywords ceramics

Country Serbia

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Gallery Image

FIG 1. UNFIRED VESSELS AND TOOLA USED IN EXPERIMENT. PHOTOGRAPH BY VESNA VUČKOVIĆ

FIG 2. CLAY KNEADING. PHOTOGRAPH BY VESNA VUČKOVIĆ

FIG 3. VESSEL MODELING. PHOTOGRAPH BY VESNA VUČKOVIĆ

FIG 4. CONNECTION OF HANDLES TO VESSEL. PHOTOGRAPH BY VESNA VUČKOVIĆ

FIG 5. CONNECTION OF HANDLES TO VESSEL. PHOTOGRAPH BY VESNA VUČKOVIĆ

FIG 6. IMPRESSED MOTIVES. PHOTOGRAPH BY VESNA VUČKOVIĆ

FIG 7. CURVED MOTIVES. PHOTOGRAPH BY VESNA VUČKOVIĆ

FIG 8. DRYING OF VESSELS.AROUNF FIRE-PIT. PHOTOGRAPH BY VESNA VUČKOVIĆ

FIG 9. APPEARANCE OF RED HEAT OF VESSEL. PHOTOGRAPH BY VESNA VUČKOVIĆ

FIG 10. APPEARANCE OF RED HEAT OF VESSEL. PHOTOGRAPH BY VESNA VUČKOVIĆ

FIG 11. APPEARANCE OF RED HEAT OF VESSEL. PHOTOGRAPH BY VESNA VUČKOVIĆ