

SOME SIGNIFICANT FINDINGS FROM THE 2001 INVESTIGATION OF THE HOTNITSA TELL, VELIKO TURNOVO REGION

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We would like to present part of our latest findings from the settlement mound (further tell) near the village of Hotnitsa, Veliko Turnovo region. It is situated at 1200 m and 40° north-east from the center of the village (the community center), on the left bank of the Bohot River (a right feeder of the Rositsa River), some 600 m from the last houses of the village, by the road to the village of Ressen. The site is located at 84.2 m over the sea level. It has roughly the form of a truncated cone with a base diameter of 110 m, upper surface diameter of 50 m and an initial height of about 5 m.

The tell was investigated in the late 1950s by N. Angelov. He excavated the uppermost building horizon and took stratigraphic probes from its southern part, where he reached a sterile layer. The results of these investigations have been publicized in three articles (Angelov 1958; 1959; 1961). Since 2000, the site has become an annual summer field school for students in Archaeology from the University of Veliko Turnovo.

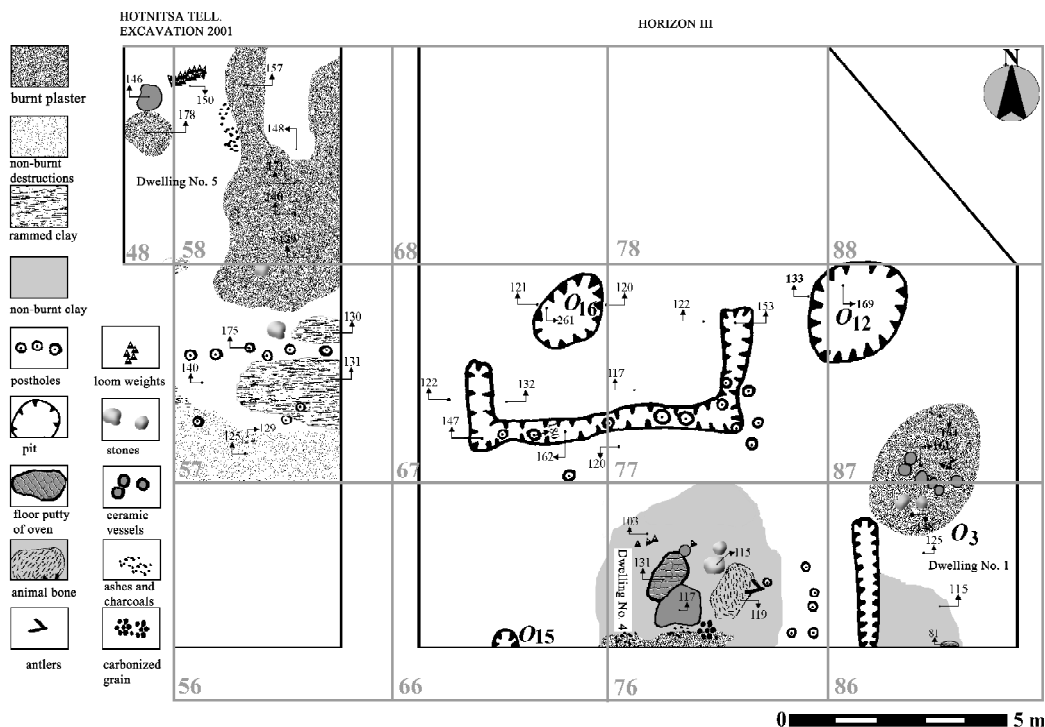
The investigations are focused on the 200 m² comprising the north-east section of the tell. So far the parts of Building Horizons II and III have been investigated (Chokhadzhiev & Elenski 2002). During the

last archaeological season we investigated several dwellings from Building Horizon III (Figure 1).

In Burnt Dwelling No. 5 we discovered a collective finding of 24 flint artifacts - 22 lamellae and two middle fragments². They had stuck closely to each other and had obviously been kept in a bag made of some organic matter (Figure 2). The lamellae are 12.5 to 16 cm long; 0.9 to 2.7 cm wide and 0.4 to 0.7 cm thick, with a triangular or trapezium-shaped cross-section. The profiles of all three are slightly curved. None of them is retouched or worn out by utilization. They have been excavated from specifically prepared single sites - probably from three different raw materials according to the observations of Dr. St. Ivanova from BAS.

Such collective findings are not rare on the tells from the late Chalcolithic - they have been seen on the Azmak tell (Georgiev 1963:166), Rousse (Georgiev & Angelov 1952:127-128), etc. We should note the probably accidental coincidence with one collective finding from the Rousse tell, comprising precisely 24 lamellae, curved, approximately equal in length and most importantly, equally unused (Georgiev & Angelov 1952:127).

Figure 1. Plan of the excavated sector in 2001.



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²The collective finding was processed by Dr. M. Gyurova from BAS (The Bulgarian Academy of Sciences). We are grateful for her cooperation in submitting to us her preliminary results.

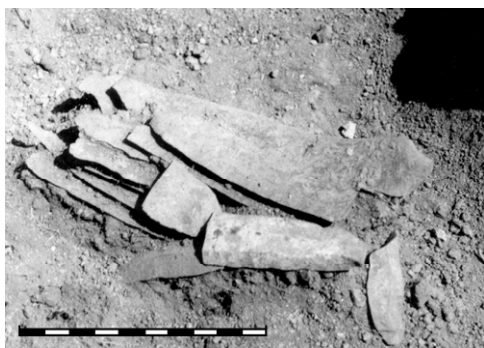


Figure 2. Flint artifacts found in-situ (Dwelling No. 5).

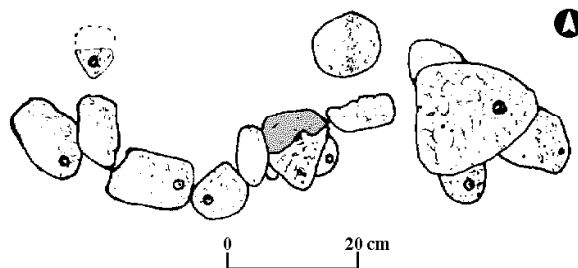


Figure 3. Loom-weights of vertical loom (Dwelling No. 5).

In the northern section of the same dwelling we have also unearthed a collective finding of 15 loom weights (Figure 3). Here we have to note that the 'vertical' or 'upright' loom is neither vertical nor upright. During the work process it is never set in a purely vertical position but always slightly tilted backward (Britnell 1977:238).

The weights were found in a line (Figure 4), which shows that they were hung on the loom at the moment when the building was destroyed. They were in a very bad condition as they had not been pre-baked and had obviously been smothered under the ruins. As the weight line is 0.88 m long, the woven cloth must have been approximately as wide. Unfortunately few similar examples have been published, but still there are some rather obvious regularities. A similar line of loom weights from Ovcharovo was about 120cm long (Todorova 1986:159, and that from Golyamo Delchevo - about 45cm (Todorova et al. 1975:27). A collective finding of weights excavated by N. Angelov in Hotnitsa shows a cloth width of about 90??. It is worth noting that all cited widths were multiples of a measuring unit somewhere between 40 and 45 cm (x1, x2 and x3). We have to remember that the 'cubit' was 41 to 46 cm long and was used in the measuring systems of many ancient peoples from the Middle East, North Africa and Southern Europe. V. Nikolov noticed this correlation when investigating the early-Neolithic settlement of Slatina, and he postulated a measuring unit of 42 cm. (Nikolov 1992: 25). The size of the looms discussed here is another confirmation that this measuring unit was used in prehistory. In the concrete case of Hotnitsa we can assume that the preferred width of the woven cloth was two cubits and the standard length of the cubit was between 42 and 45 centimeters.

³ Materials from the fund of RIM - V. Turnovo.

The overall weight of the loom weights is approximately 9 kg, with the smallest ones around 300 g. Particularly interesting seems to be one big weight of almost 1600 g. It was found in the western part of the line (Figure 5). Besides its unusual size and weight, it is set apart by the technology of its production as it consists of two layers of clay. Inside is the original weight which was later for unknown reasons coated with another thick layer of clay.

Among the burnt ruins of the dwelling (in its southern part) another dozen of weights were discovered which, although set wider apart from each other, were definitely ordered in a kind of line. Most of them were not lying directly on the floor of the dwelling but were found among the burned ruins of the walls. They were considerably better preserved as they seem to have been in an oxygen environment and have even sometimes stuck to the plaster of the walls. Their location implies that they must have fallen from a certain height, most probably from the wall. They could have been laid on a shelf, but in this case they should have scattered on the ground instead of keeping some kind of line. We might therefore assume that at the time of the fire they were on the threaded warp which was hung on the wall. This could be an indication that the warp was movable and consisted of one beam on which the warp threads were tied, with the weights hung on the other end. Several such warps could easily be hung on the wall without taking too much space. The warping of this type of loom should be different as it only has one warp-beam. Whereas in the two-warp looms the warp threads are not very numerous (for the simplest weavings there can be just one of them) and they go around the warps several times, in the 'vertical' loom there must have been at least as many warp threads as there are weights. Probably the process of warping neither coincided with the weaving nor immediately preceded it.



Figure 4. Loom weights (Dwelling No. 5).



Figure 5. A big loom weight from Dwelling No. 5.



Figure 6. Animal bone found over a floor putty during the excavations (Dwelling No. 4).

The warped base was probably kept in the dwelling as the warp-beam was secured on some wooden nails or even ordinary pieces of wood stuck into the wall, whereas the weighs hung freely on the threads. When it was time for weaving, the warp was simply taken down from the wall and positioned on the frame of the loom; the odd and even threads were carefully separated and the reed was tied.

Lastly, we have to bear in mind that loom-weights can be found preserved in situ in loom order only if the loom was set up and warped at the time when the dwelling was destroyed. This argument is based on the assumption that space was sparse and the loom had to be movable and was only mounted when it was in use. It is logical to assume that weaving was only possible at times which were free from any other activities. Winter was a season comparatively free from agricultural activities, so it seems probable that weaving was a winter activity. We can therefore logically assume that the discovery of lined-up loom weights is a sign that the dwelling was destroyed in winter. This is naturally only a hypothesis which can only be proved by additional

arguments.

In Dwelling 4 we made another interesting finding. When investigating the floor of the dwelling, we found more than 150 animal foot bones. The floor was made of yellow-gray tramped clay, approximately 5cm wide. The area where the bones were discovered was a rough 0.60 / 0.75 m rectangle located in the southern part of the dwelling. The careful clearing showed that the object did not represent a pit where the bones were laid or discarded. They were all laid simultaneously with the floor and were plastered within it (Figure 6). In the eastern part of the dwelling we discovered V-shaped antlers. There were deer, bovine, rook, boar, sheep and goat bones⁴. Our preliminary hypothesis is that we have found traces of a blood sacrifice related to the building of the dwelling - a tradition known in the prehistory of wide geographical areas in the Middle East and Europe (Nikolov 1992: 90) and continuing to exist even in modern times.

The investigation of dwelling ? 1 in area 86 - 87 was completed this season. The part which falls within the investigated sector is located in its western half. On the borderline of the two squares we found a cluster of ceramic vessels, whole and fragmented, as well as several loom-weights. A small closed vessel with a little opening deserves special attention (Figure 7). In 2000 another miniature vessel with a narrow opening and a capacity of 40cm³ was discovered in the same dwelling. So far we presume that it was used for mixing liquids - something like a shaker. The vessel could be held comfortably by the concave and the opening could be closed with one finger so that the vessel could easily be turned in different directions according to the necessity of mixing or pulverizing the fluids.

Of course, gold objects are the most problematic. In the last archaeological season we discovered three golden convex lamellae (Chokhadzhiev, Elenski 2002:Figure.5:1-3), and this year we found a spiral 12.2cm long and 1.3 mm wide (Figure 8). The relief of the spiral was inspected with a scanning electronic microscope in a regime of secondary electronic emission⁵. On the surface there were clearly visible longitudinal flutes (Figure 9), probably made by drawing the heated wire through a calibrated opening. The spiral was chemically analyzed and proved to have the highest concentration of gold

⁴ The finding was investigated by Dr. L. Ninov from BAS, who kindly shared the preliminary results with us.

⁵ The research was completed by L. Petrov from BAS.

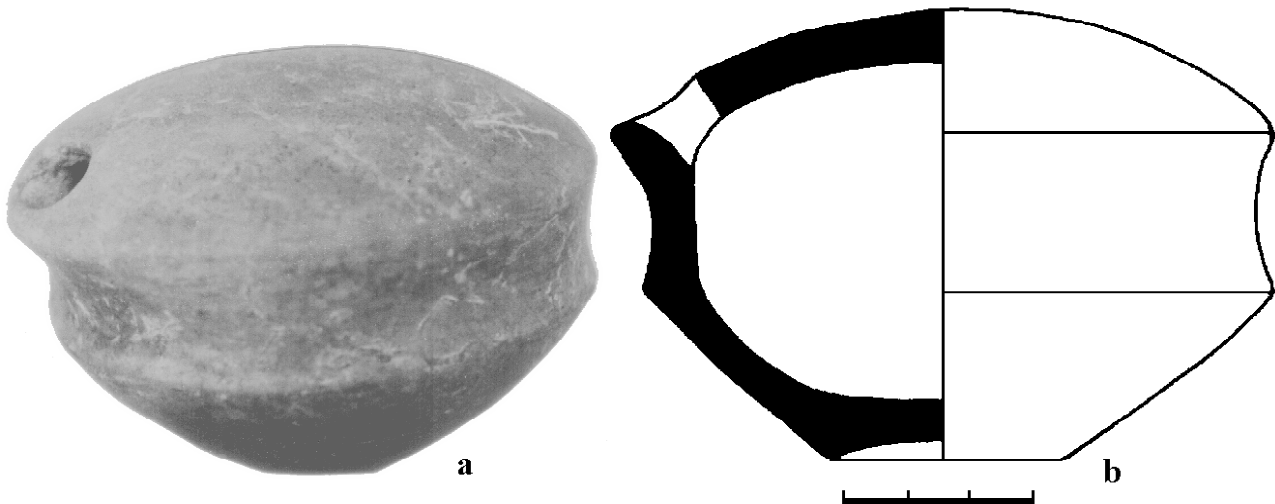


Figure 7. A vessel - shaker from Dwelling No. 1.

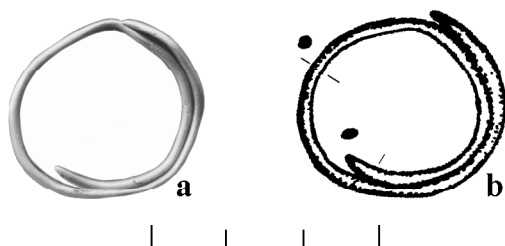


Figure 8. A Gold spiral.

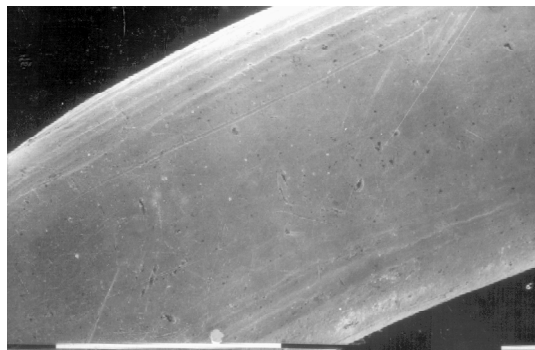


Figure 9. The surface of the gold spiral from Figure 8.

in comparison with the other three objects - more than 96% gold, almost 4% silver and insignificant amounts of copper. In the other objects the ratio of gold to silver is respectively 10:1; 5:1 and 8:1. The different chemical composition indicates that the objects were made at different times or from different 'portions' of metal from different deposits. Of course, we could make various other suggestions about the mining of the gold, the place where the objects were crafted, the manner of their distribution, their equivalents, etc.

The reported season's investigation at Hotnitsa tell makes a definite contribution to the study of the late Chalcolithic in the region and pose new questions for future research.

REFERENCES

- Angelov N. 1959 Selishtnata mogila pri s. Hotnitsa. In: *Sbornik izsledvaniya v chest na akad. Dechev*. Sofia, 389-403.
- Angelov N. 1961 Zlatoto sukrovishhte ot Hotnitsa. *Arkheologiya*, 1-2, 38-46.
- Angelov N. 1961 Rabotilnitsa za ploski kostni idoli v selishtnata mogila pri s. Hotnitsa, Turnovsko. *Arkheologiya*, 2, 34-38.
- Britnell W. J. 1977. How Upright Was the Warp-Weighted Loom. *Antiquity*, 1977, 51, 238-239.
- Chokhadzhiev S., Elenski N. 2002 Novi prouchvaniya na selishtnata mogila kraj selo Hotnitsa, Velikoturmovska oblast. In: *Yubileen sbornik v chest na prof. Dimitur Ovcharov*. V. Turnovo, 24-29.
- Georgiev G., Angelov N. 1952 Razkopki na selishtnata mogila do Ruse prez 1948-1949 g. *Izvestiya na Arkheologicheskiya Institut* 18, 119-195.
- Georgiev G. 1963 Glavni rezultati ot razkopkite pri Azmaskata selishtna mogila prez 1961 g. *Izvestiya na Arkheologicheskiya Institut* 26, 157-176.
- Nikolov V. 1992 *Rannoneolitnoto zhilishte ot Slatina (Sofia)*. Razkopki i prouchvaniya 25. Sofiya.
- Todorova H., Ivanov S., Vasilev V., Hopf M., Kvita H., Kol G. 1975 *Selishtnata mogila pri Golyamo Delchevo*. Razkopki i prouchvaniya 5.
- Todorova H. 1986 *Kamlenno-mednata epokha v Bulgariya*. Nauka i izkustvo. Sofiya.