

The last phase of the Tripolye Culture in Ukraine (The 2009 field season)

Francesco Menotti

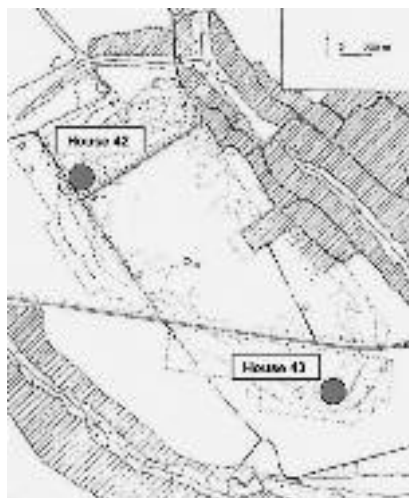
Introduction

The 2009 research campaign of the project: *The last phase of the Tripolye Culture in Ukraine: New developments of East/West patterns of human interaction in the 3rd Millennium BC* consisted of the excavation of two more houses (house 42 and 43) in the giant settlement of Talianki (fig. 1) as well as the study of the currently excavated Tripolye Culture sites of Bernashovka 1 and Bernashovka 2 on the Dniester River (Vinnitsa region). The latter two sites are part of a salvage excavation being carried out by Ukrainian archaeologists who kindly agreed to let me collect some samples for comparative analyses. Wet-sieving as well as botanical and geological sample collection was carried out on all of the above-mentioned sites (see below). The on-site experimental archaeology and folklore activity (the Toloka) which started last year (2008) with the reconstruction of a 5,500-year old Tripolian house, continued and concluded this year (2009) with the traditional painting and decoration of the house (see below).

Fig. 1 The layout of the Tripolye Culture giant settlement of Talianki, with the approximate location of the two excavated houses

Fig. 2 House 42 (Talianki settlement) (Photograph: F. Menotti, 2009)

Fig. 3 House 43 (Talianki settlement) (Photograph: F. Menotti, 2009)



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Talianki Giant Settlement

Instead of the usual two houses in the same location (Kruts *et al.* 2008), this year the houses were selected in two different locations within the settlement: one (house 42 – fig. 1 and fig. 2) in the northern part of the village (inner row 3), and the other (house 43 – fig. 1 and fig. 3) in the southern part of the village (inner row 2). The purpose of choosing the houses in two different locations was that of identifying differences in construction typology as well as chronology within the entire settlement. In addition to a detailed typological study of the house remains and artifacts, soil and archaeobotanical samples were collected. Particles of charcoal found during the wet-sieving process were sent to the Oxford AMS laboratory for ¹⁴C dating (see below).

Bernashovka Settlements (1 and 2)

Because of a road construction project, a rescue excavation of two Tripolian settlements is currently being carried out by Ukrainian archaeologists in Bernashovka, a small town situated on the Dniester River in south-western Ukraine (Vinnitsa region). One settlement, (Bernashovka 1) belongs to the early phase of the Tripolye Culture (Pre-Cucuteni), and the other (Bernashovka 2) was constructed during the latest phase (Tripolye B2-C1) which coincided with the development of the Talianki giant settlement (Kruts



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2008). Three houses are being excavated altogether; one in Bernashovka 1 (fig. 4) and two in Bernashovka 2 (fig. 5a&b). All three houses seem to differ from the typical Tripolian buildings. Size and typology leads us to believe that they were all used as storage houses rather than habitations. Different building techniques, functions of the houses as well as a long chronology between the two settlements highlight the importance of Bernashovka archaeological sites in order to gain a better understanding of the chronological development, migration processes and downfall of the Tripolye culture. Thanks to collaborative links to the archaeologists who are excavating Bernashovka 1 and 2, it was possible for us to collect archaeobotanical and charcoal samples which will be used to reconstruct absolute and relative chronologies and compare them to those of the Dnieper River region (e.g. the giant settlement of Talianki).

Wet-sieving, identification of organic remains and ¹⁴C dating

In addition to a detailed typological study of house remains and artefacts, also this year, wet-sieving was carried out on selected areas of both excavated houses (house 42 and house 43) of the Talianki giant settlement. The macro-organic remains obtained were identified and sorted by Lucia Wick (Basel University). Diagnostic charcoal particles were carefully studied in order to identify the wood species, and the larger ones were sent to the Oxford AMS laboratory for ¹⁴C dating. Finally, the contents of seven entire, or partially entire, pots were cautiously selected for soil chemical and palynological analyses, which will be carried out in the final year of the project.

Wet-sieving

The soil for wet-sieving was collected from four 50×50 cm pits within each of the two excavated houses (42 and 43 – two pits per house, see figs. 6 and 7). The soil was collected in each pit every 10 cm from top to bottom (original surface where the house was constructed) of the house remains. The wet-sieving was carried out using a 1 and a 0.5 mm-mesh sieve.

House 42

The two pits in house 42 (fig. 6) were located as follows:
 Pit 1 between the podium and the altar (grid coord. E-4)
 Pit 2 on the porch of the house (grid coord. B-6)

Pit 1 reached a depth of 40 cm, whereas pit 2, due to thicker house remains (clay blocks), was 10 cm deeper (50 cm). As a result, four bags of soil (each one 10 cm – see above) were obtained from pit 1 and five from pit 2. The amount of soil in each bag varied and depended upon the quantity of clay blocks in each of the 10 cm layers. The first 20 cm from the top usually contained more house remains and therefore less soil.



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Fig. 4 Layout of house 1 (Bernashovka 1) (Photograph: A. Dyachenko, 2009)

Fig. 5a Layout of house 1 (Bernashovka 2) (Photograph: A. Dyachenko, 2009)

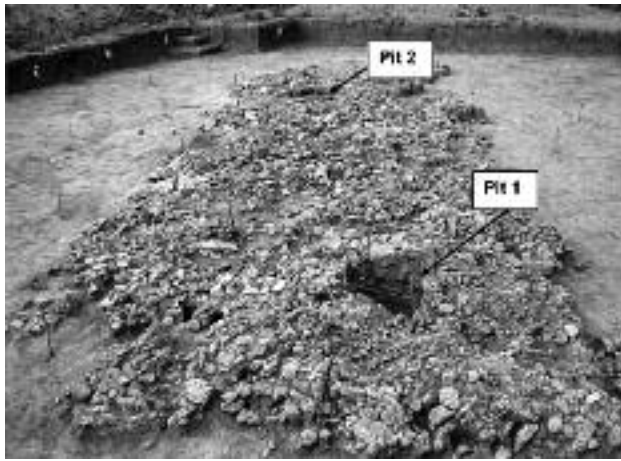
Fig. 5b Layout of house 2 (Bernashovka 2) (Photograph: A. Dyachenko, 2009)



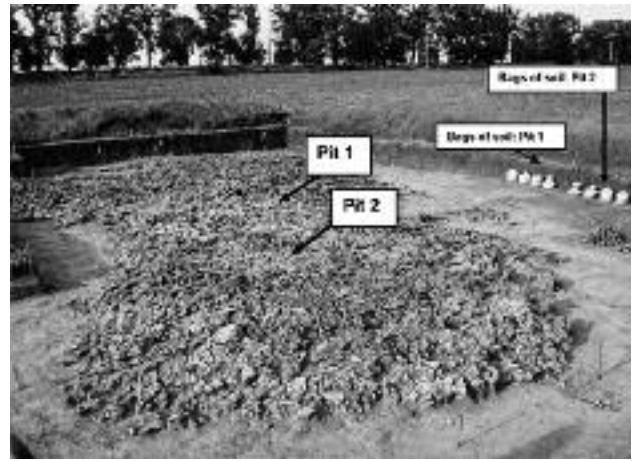
5a



5b



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Fig. 6 House 42 with the location of the two excavated pits for wet-sieving (Photograph: F. Menotti, 2009)

Fig. 7 House 43 with the location of the two excavated pits for wet-sieving (Photograph: F. Menotti, 2009)

Fig. 8 Pots whose contents have been selected for palynological analyses

Altogether, the two pits of house 42 produced nine bags of soil (four from pit 1 and five from pit 2).

House 43

The two pits in house 43 (fig. 7) were located as follows:

Pit 1 near the oven (grid coord. Ж-5)

Pit 2 near the altar (grid coord. Д-7)

Due to a more homogenous distribution of house remains, both pit 1 and pit 2 reached the depth of 40 cm, resulting in four bags of soil (each one 10 cm – see above) in each pit. As in house 42, the amount of soil per bag varied, and also in this case it depended upon the quantity of clay blocks in each of the 10 cm layers. Altogether, the two pits in house 43 produced eight bags of soil; four from pit 1 and four from pit 2 (see fig. 7).

Archaeobotanical analyses

The organic remains of the seventeen wet-sieved bags of soil obtained from the four above-mentioned pits were put in plastic test tubes and were sorted and analysed by Lucia Wick, Basel University.

Identification of organic macro-remains (by L. Wick)

The organic material found in each of the 17 wet-sieved bags of soil was sorted and macro-remains were determined. In almost all the samples, snails and rootlets were found, as well as seeds. The latter originate mainly due to recent contamination, i.e. they stem from the recent vegetation on and around the site (Chenopodiaceae,



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Talianki H 42 and H 43, macro-remains

House	H 42	H 42	H 42	H 42	H 42	H 42	H 42	H 42	H 42	H 43	H 43	H 43	H 43	H 43	H 43	H 43	H 43	H 43	
Location	Porch	Porch	Porch	Porch	Porch	Pod / Alt.	Pod / Alt.	Pod / Alt.	Pod / Alt.	Altar	Altar	Altar	Altar	Oven	Oven	Oven	Oven	Oven	
Level	0/-10 cm	-10/-20 cm	-20/-30 cm	-30/-40 cm	-40/-50 cm	0/-10 cm	-10/-20 cm	-20/-30 cm	-30/-40 cm	0/-10 cm	-10/-20 cm	-20/-30 cm	-30/-40 cm	0/-10 cm	-10/-20 cm	-20/-30 cm	-30/-40 cm	-30/-40 cm	
<i>artefacts</i>																			
plaster						x													x
<i>varia</i>																			
stones, pebbels										(x)	x								
burnt clay (reddish)	x	x	x	(x)		(x)	xx	(x)	(x)	xx	(x)	x	(x)	(x)	x	x	x	x	
sinter / mineral concretion																			
clay	xx	xx	xxx	xx	xx	xx	xxx	xxx	xxx	xxx	xxx	xx	xxx	xx	xx	xxx	xxx	xxx	xxx
<i>bones big animals</i>																			
cancellous bone fragment																			
burnt bone																			
calcined bone																			
tooth																			
<i>bones small animals</i>																			
sundries	x				xx				xxx										
<i>molluscs</i>																			
muschel																			
snail	x	x	x	(x)	x	x	x	(x)	xx	x	(x)	(x)	(x)		x	(x)		x	
<i>insects</i>																			
insect fragments																			
<i>botanical remains</i>																			
charcoal	(x)	xx	x	xx	xx		x	(x)	xx	xx	xxx	xxx	xx	(x)	xxx	xxx	xxx	xxx	xxx
charred bark																			
AOV (amorphous charred ot charred seeds)	(x)	(x)	(x)				(x)	(x)	xx	(x)	x		(x)		x	x	x	x	
mineralized seeds																			
<i>modern contamination</i>																			
leaves	xx	x				(x)	x												
insects	xx	xx	x						x		(x)				(x)	(x)	(x)	(x)	(x)
seeds	xx	x		x						xx	x	(x)		x	x	(x)	(x)	(x)	(x)
rootlets	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xx	xx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
caulis				x	x					x	x	xx	xx	x	xx	xx	xx	xx	x
wood																			
bark					(x)									x	xx	xx	xx	x	xx
budscapes	x		x				x												
remarks																			

Table 1 Organic material found in the wet-sieved soil samples (house 42 and house 43)

Polygonaceae, etc.). A grain of cereal (wheat) was also found in house 43 (near the altar; at a depth of -20 to -30 cm ((???) from the clay remains) (see table 1).

Charcoal fragments were found in almost all the samples. Some of the pieces are quite large (house 43/oven); they were identified as oak (house 42) and ash (house 43) and a proportion of them were sent to Oxford for ¹⁴C dating (see below).

In the sample -30 to -40 cm in house 42 (podium/altar), the jaw of a small rodent was found.

Palynological analyses of pot contents

Amongst the large number of pottery fragments recovered from the two excavated houses in Talianki, seven entire, or partially entire, pots with intact contents were selected. Palynological analyses of the contents of these seven pots (five found in house 42 and two in house 43 – see tables 2 and 3; and fig. 8), will be carried out in 2010.

Pot 1	Grid coord:	3-5
Pot 2	Grid coord:	3-5
Pot 3	Grid coord:	E-4
Pot 4	Grid coord:	Д-5
Pot 5 (four-legged pot)	Grid coord:	Ж-5

Table 2 Grid coordinates of the entire, or partially entire, pots found in house 42

Pot 1 (outside the house)	Grid coord:	E-10
Pot 2 (altar)	Grid coord:	Д-9

Table 3 Grid coordinates of the entire, or partially entire, pots found in House 43

¹⁴C Dating

A selection of charcoal particles found in house 42 and 43 (Talianki giant settlement), and house 1 (Bernashovka 1, Dniester region) were sent to the AMS laboratory in Oxford for ¹⁴C dating (see table 4). The decision to include a sample from Bernashovska 1



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Fig. 9 Three stills of the Toloka in 2008
(Photograph: F. Menotti, 2008)

was made in order to shed more light on the absolute early Tripolian chronologies in western Ukraine which will eventually be linked to later ones in the western part of the country.

Sample	Grid-Coord.	Stratigraphy	Geog.-Coord.	Wood species
Talianki House 42	E-4/B-6	-80 cm	Lat 48° 48' 22"N Long 30° 31' 30"E	Oak (<i>Quercus</i>)
Talianki House 43	Д-7/Ж-5	-90 cm	Lat 48° 47' 33"N Long 30° 33' 14"E	Ash (<i>Fraxinus</i>)
Bernashovka 1 House 1	3-1	-40–50 cm	Lat 48° 34' 04"N Long 27° 28' 06"E	Oak (<i>Quercus</i>)

Table 4 Charcoal samples sent to the AMS laboratory in Oxford for ¹⁴C dating

The purpose of obtaining ¹⁴C dates from various Tripolye Culture settlements (from the Dniester to the Dnieper) is to develop an absolute chronology (presently still at an infancy stage within the Tripolian research in Ukraine) which will be subsequently compared to the already well-established relative one (based on pottery typology) (Passek 1949; Ryzhov 1993). This will certainly improve our understanding of initial eastward migrations and the consequent development of western Tripolye local groups that are linked to the establishment and decline of the giant settlements between the Southern-Bug and the Dnieper region (Kruts, 2008; Ryzhov, 2008).

Experimental archaeology and folklore: the Toloka

Since one of the principle objectives of the project is to involve local communities and help them to appreciate their cultural heritage, last year (2008), the Tripolye Museum of Legedzeno, in collaboration with the Tripolian Reservation and the Cultural Heritage, organised an important cultural event called the Toloka, whereby people of the local community as well as from other areas were invited to help plaster a newly-built house with clay. For this particular event, the museum built an experimental Tripolian house and, using the same techniques used by the Tripolians 5,500 years ago (Kolesnikov 1993; Korvin-Piotrovskiy and Menotti 2008), the house was fully daubed in clay, mixed with chaff (see fig. 9).

This year (2009), the folkloristic activity of traditional Tripolian house-building was completed by painting the house. The response of the local community was very positive, and the house was successfully painted using traditional pigments obtained from organic and inorganic materials (figs. 10, 11 and 12).



Fig. 10 Painting the traditionally built Tripolian house (the Toloka) (Photograph: F. Menotti, 2009)

Fig. 11 Painted motifs around the circular window (Photograph: F. Menotti, 2009)

Fig. 12 Painted motifs on the longest axis of the Tripolian house (Photograph: F. Menotti, 2009)

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Conclusions

The 2009 research season proved to be very successful. Everything went smoothly as planned, from the research preliminaries at the beginning of the year to the excavation in Taliianki, the data collection in Bernashovska during the summer, and the various scientific analyses afterwards. Plans and agreements for the final season (2010) have already been made and discussed with the Ukrainian collaborators (early this year – 2010), and we all are looking forward to a fruitful and productive final campaign.



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