



■ Fig. 2 Saharna-Țiglău: Construction I: a general view; b trunk pit and the fragment of a calcinated trunk; c in situ fragment of a wooden calcinated trunk which fell.



■ Fig. 3 Burying the central trunks.



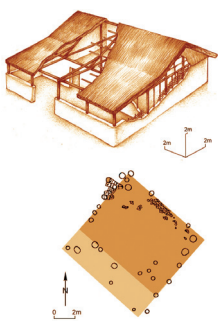
■ Fig. 4 Central trunks for roof strengthening.

Reconstructing an early iron age habitat at Saharna-Țiglău on the middle Dniester

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Introduction

The basin of Middle Dniester has been an important historical and ecological zone in the North-Western Euxin Pontic space since ancient times. We have, as a proof, different archaeological monuments found in the neighbourhood of the village Saharna in Rezina district, Republic of Moldova. Nowadays, almost a hundred are known within this micro zone. The monuments are attributed to the Iron Age, mainly to Cozia-Saharna's civilization (10-8th centuries BC) and the Getics culture (4-3rd centuries BC). All these monuments are attested to archaeologically as fortresses, open settlements, tumuli and necropoli (Kašuba, Haheu, Levički 2000; Niculiță, Zanoci, Arnaut 2007; Kašuba 2000; 2008, 40).



■ Fig. 1 Alcedar III: the digging plan and the variant of house's II graphical reconstruction (according to Kašuba 2007).

The archaeological investigations of these monuments during the last decades has produced a lot of new data on the evolution of human communities in the basin of Middle Dniester in the period of the Early iron Age, showing a high level of development and the original character of the Cozia-Saharna civilization in South-eastern Europe (Niculiță, Zanoci, Arnaut 2007; Kašuba 2000, 365-367; Kašuba 2008, 40; Niculiță, Zanoci, Nici, Matveev 2003; Niculiță, Nici 2002; 2007; 2008; Zanoci, Băț 2007; Никулицэ, Заноч, Матвеев, Ничик 2008).

The initiation of the project

The connection between EXARC and Scientific Lab "Tracology" has inspired the first experimental archaeology project in the Republic of Moldova, via the organization of

an archaeological park with an open air museum at Saharna-Țiglău.

The archaeological complex Saharna-Țiglău is placed on a dominant terrace on the right bank of the river Dniester, on the northern edge of the Saharna village in Rezina district, almost 100 km from the city of Chișinău. It is represented by an open habitat (almost 6 hectares) and a plane necropolis with burials in stone caskets (around 30 such burials are being researched,) attributed to Cozia-Saharna culture. The level of material and spiritual culture reflects the peak period of the Early Iron Age civilization of South-Eastern Europe (Kašuba, Гольцева 1991; Kašuba 2000; Niculiță, Nici 2008).

These criteria determined to a great part, the foundation of a prehistoric open air museum reconstructing the

archaeological discoveries of Cozia-Saharna recovered during archaeological investigations of the area of the basin of the Middle Dniester.

The museum is organised by the Archaeological and Museum Association Saharna-Țiglău, whose founders is SRL „Max-Victor” from the Rezi-na town who possess agricultural lands reserved for the archaeological museum complex, and the Scientific Researches of the laboratory of ”Tra-chology” from Moldova State Uni-versity, that coordinates the process of arrangement and reconstruction of the prehistoric park ”Saharna-Țiglău”. All the reconstructive work is done by small volunteer student groups, in collaboration between MSU and SRL „Max-Victor”.

Archaeological context

Three houses in Alcedar III served as models for the reconstruction of the habitat of the Cozia-Saharna culture at Saharna-Țiglău. Alcedar III was discovered by the Dr. M. Kašuba and their reconstructive variants were proposed by Ivan Lit-suk (*Kašuba 2007*). A similar house with dimensions of 7×9 m (Con-struction I) was discovered during the archaeological investigations Saharna-Țiglău, studied under the guidance of professor dr. I. Niculiță and the undersigned during 2007-2008, whose materials are in the process of analysis and interpreta-tion. Both archaeological contexts have created methodological docu-mentary support for the experi-ment in reconstructing elements of Cozia-Saharna culture (*fig.2*).



■ **Fig. 6** Strengthening of lateral trunks.

The purpose of the experiment

One of the main purposes of house reconstruction is to estimate the relation between the amount of material used to build such construction in correlation to the human factor and the time needed for building. Another purpose of the experi-ment is the reconstitution and veri-fication of the prehistoric construc-tion techniques of houses attested to by archaeological discoveries at Saharna-Țiglău (fragments of walls with prints of construction materi-als; fragments of carbonated trunks; dimensions and graphical plan of trunk pits etc), which are reflected, in a part, by ethnographical data.

The development of the experiment

As the base of the first house re-constructed at Saharna-Țiglău was house no. II from Alcedar III, which was rectangular in plan with dimensions of 9×9 m, oriented with the entrance to the South-west (*fig.1*).

The first part of the experiment was to construct the wooden „skele-ton” of the house, while maintain-ing the graphical plan, dimensions and the placement of the trunk pits and the orientation of the mod-el house. Trunk pits were dug into the earth around the entire perim-eter, which had diameters 0,3-0,4 m and a depth of 0,5 m. The verti-cal trunks were mounted at a dis-tance that determined the contour the house skeleton. (*fig. 3, 4, 6, 7*).



■ **Fig. 7** Strengthening of external trunks of the house.



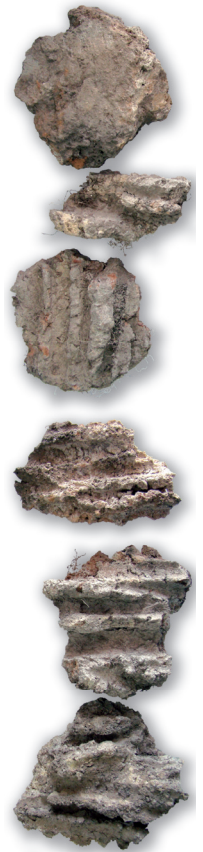
■ **Fig. 8** Plait the lime bast rope.



■ **Fig. 9** Binding of the houses beam with lime bast.



■ **Fig. 10** Lime ropes prepared for the experiment.



■ **Fig. 5** Fragments of clay modelling with prints of wooden twigs and beams.



■ **Fig. 11** Fix the lateral beams.



■ **Fig. 12** Fix the roof's lateral trunks of the house.



■ Fig. 13 Fix the roof's lateral trunks of the house and wall plait with branches.



■ Fig. 14 Walls plaited with twigs.



■ Fig. 15 Walls plaited with branches.



■ Fig. 16 Final aspect of the house's wooden construction, north-eastern view.



■ Fig. 17 Binding of construction elements with flaxen rope.



■ Fig. 18 Binding of construction elements with flaxen rope with lime bast.



■ Fig. 19 Final aspect of the house's wooden construction, south view.



■ Fig. 20 Roof arrangement with reed.



■ Fig. 21 Coverage of the house with reed.



■ Fig. 22 Reed roof, general view.

The trunks chosen were not over a diameter of 0,25-0,3 m, such as the calcinated trunks attested at Saharna-Țiglău (fig. 2). Pits of larger dimension were dug in order to support the roof line on the long axis (fig. 4), in such a way as to install central trunks, as was observed in Construction I at Saharna-Țiglău (fig. 2). The trunks were supported in the ground by gravel and earth, well tamped down with a wooden axe handle (fig. 3, 6, 7). The wood used was elm, oak, acacia and conifer that was taken, quickly and easily, from the neighbouring forest due to its abundance.

The next part of the experiment was to connect the wooden trunks with horizontal beams marking the lateral walls or with lop-sided trunks that give the roof its gabled form (fig. 11, 17, 18), finishing the house skeleton. The whole wooden structure of the house was tied together with ropes, made of lime peel (fig. 8-10) or flaxen ropes, as a whole 300 m was used.

The next part of the reconstruction were the wall hurdles made with thin wooden branches in vertical segments. (fig. 12-15). The model is based on fragment analysis of walls, from which we have the prints of branches attested to in the archaeological researches at Saharna-Țiglău, which indicates some that branches were used to construct the walls, as a rule they were not over 1.5-3 cm thick (fig. 5). At the same time as the wall hurdle construction the house's roof and front attic were finished by the bonding of some wooden lateral beams that were strengthened with longitudinal trunks (fig. 14, 17, 18), when this had been done the basic structure had been completed.

When the house skeleton was finished (fig. 12, 15) some 25 m³ of wood, 300 m of rope had been used by 30 persons over 6 days.

The next level of construction was the construction of the reed roof (fig. 13, 16) and the finishing of the walls with clay, processes which were done at the same time. The thickness and composition of the daub on the wall is based on the archaeological data (fig. 5) which

gave us some details (4-5 cm), a fact that will help us to continue the houses' reconstruction. For the roof the material used was river reed, based both on ethnographical data and the abundance of this plant in the Dniester meadows. A situation which is probably unchanged from the prehistoric period.

Conclusions

As a whole, the archaeological experiment initiated at Saharna-Țiglău, is expensive when speaking about the materials used, along with the time and work volume both from the view of contemporary and probably prehistoric people, who would also need almost 25 m³ of wood, 300 m of rope and a large amount of man hours (the work took 6 days with 30 participants), both for preparing the materials and building a house with a wooden skeleton with dimensions of 81 m². This fact probably means that this was an expression of a collective community work or a large extended family of the Early Iron Age.

Obviously this first archaeological experiment in Moldova, trying to reconstruct a habitat complex of the Cozia-Saharna Iron Age type at Saharna-Țiglău, using archaeological or ethnographical data, represents a beneficial and decisive step for archaeology as practiced in Moldova. This fact, we hope, will allow us, in the future, to be the base for other categories of cognitive scientific research for interpreting and analyzing the archaeological materials of the Middle Dniester zones Early Iron Age.

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Summary

Reconstitution d'un habitat du Premier Age du Fer à Saharna-Tiglaeu

Le bassin du Dniester central était autrefois un territoire important. Dans le district de Rezina en République Moldave, une centaine de monuments archéologiques datés du Premier Age du Fer sont documentés. Le parc archéologique de Saharna-Tiglaeu reconstruit l'ensemble d'habitations de la civilisation Cozia-Saharna (X^e-VIII^e av. J.-C.). C'est le premier projet d'archéologie expérimentale en République Moldave.

Zur Rekonstruktion des früheisenzeitlichen Siedlungsraumes von Saharna-Tiglaeu

Die Flussebene am Mittleren Dnestr war in ur- und frühgeschichtlicher Zeit eine bedeutende Zone. Im Distrikt von Rezina in der Republik Moldawien sind beinahe hundert archäologische Monumente aus der Eisenzeit dokumentiert. Der Archäologische Park von Saharna-Tiglaeu, in welchem ein Siedlungsraum der Cozia-Saharna-Kultur (10. – 8. Jh. v. Chr.) rekonstruiert wird, ist das erste experimentalarchäologische Projekt in der Republik Moldawien.