

New data on settlement patterns in Trentino between the Bronze and Iron Age: the site of Mezzolombardo – La Rupe

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ABSTRACT - The site is situated to the north of Trento, on the hydrographic right of Torrente Noce, at about 250 metres above sea level. Emergency excavations in the spring of 1992 brought to light part of a settlement structure attributable to the early Bronze Age. Several phases of use and restructuring were evident. From 1995 a wider area around the one mentioned above was excavated. The anthropic deposits provided evidence of a structured settlement system, (and are still being excavated), which documents continual habitation at least up to the early Iron Age. It is a complex composed of three terraced areas, with containment walls, hearth remains with basal preparation and postholes.

Key words: Valle dell'Adige, Cones, Bronze Age, Iron Age, Terracing, Settlement structures

Parole chiave: Valle dell'Adige, Conoidi, Età del Bronzo, Età del Ferro, Terrazzamenti, Strutture insediative.

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The site is situated on the Adige valley floor, SW of the town Mezzolombardo (Trento), at the locality "La Rupe", on a detrital cone below the Dolomite rock faces known as "Le Crone". Over the last decade the cone has been excavated for the production of gravel by the company I.P.S.A. (Fig.1). Acting on information received from Fausto Corazzola and Giuseppe Borgogno, the Ufficio Beni Archeologici of the Province of Trento began excavations in 1992 at various points of the cone. These excavations continue today.

In the area being discussed, along the right side of the Adige Valley, detrital cones represent a physiological connection between the dolomite – limestone rock faces and the flood plain. Due to this peculiarity they are very sensitive recorders of the slope processes that are caused by climatic, structural and anthropic factors (Fig 2).

In general the cone deposit, which consists of detrital materials from the rock faces above, is organised in layers and lenses of varying thickness, the foundations have full or partial clastic support, while layers

with clastic support are less frequent. The geometry of the sedimentary bodies is generally cuneiform with a convex surface, with a friction angle of 25-30°. The granulometry of the detritus ranges from medium-large sand to blocks often measuring metres across. The materials are arranged by gravity with direct gradation and often re-elaborated by widespread stream action and concentrated in deep channels that denote intense erosion phenomena.

As mentioned above, detrital cones constitute a true microenvironment where essentially aggradation processes dominate and determine the progradation of the sedimentary body towards the centre of the valley.

Cone sedimentation rate and the aggradation process depend on various factors, such as the climate, (temperature, rainfall and slope exposure), the physical-mechanical properties of the rock in the walls, catastrophic events and anthropic impact. Overall the picture presented is one of conditions constantly at the limits of geomorphic stability where the pedogenetic cover is poor and not very developed.

The oldest structural remains brought to light during the 1992 excavations (sector A) can be dated, on the basis of ceramic finds (Fig.3), to the early Bronze Age. The stratigraphic sequence was subdivided from the bottom into a series of phases that comprised times of anthropic intervention and times of abandonment.

In the initial phase there was a sub-horizontal cut down to the sterile detritus of the cone, which had the purpose of structuring the area of the slope by the creation of one or more terraces for the settlement (Fig.4).

Burnt and collapsed wooden elements allows the hypothesis of the presence of structures for the containment of the terraced areas. This phase conserves an occupation surface that probably pertains to a hut for which numerous perimeter postholes have been identified (south side) along with a hearth equipped with gravel insulation and loose ceramic sherd foundations (Fig.5). The narrowness of the area conserved did not allow the clear recognition of the limits of this structure, which, however, was probably rectangular with the larger axis orientated east-west. The destruction of the hut was due to a fire of which there were abundant traces in the carbonised wood and in the thermal alteration of the ceramic, lithic (Fig.6) and faunal finds. After the fire there follows a phase of preparation in the area below with the introduction of detritus to restore the use of the surface after the collapse of the preceding containment work.

The second occupation phase conserved remains of a comparable settled layer with several postholes mainly concentrated in the east part of the sector (Fig.7). The clear sequence of the remaking of at least three hearths documents the prolonged use of this surface, which is also relative to a housing structure that repeats the dimensions and orientation of the preceding structure.

The almost perfect coincidence of the fireplaces of both phases allows the hypothesis of rebuilding completed in a relatively brief time period with a "memory" of spatial and functional use of the area that was still fresh. With regards to this, an area of combustion situated in the proximity of the rock wall seems to have been active during both phases. Preliminary spatial analysis regarding the finds in green stone seem to demonstrate the definite continuity in the functional use of the internal space; indeed these elements show the same location of the fireplaces in both phases. Archaeobotanic analysis, up to now only conducted on a limited sample of burnt wood remains, has demonstrated substantial uniformity in the use of the various types of wood in the two phases. Oak is predominant in structural elements, but also ash and conifer have been found (*Picea*, larch) (Castiglioni, unpublished report, 1997).

Due to the advance of the quarry in the south of

the area previously excavated, further excavations were started in 1995 and these are still in progress.

The data acquired, even though it is still at a preliminary stage, has permitted the recognition of a stratigraphic series that holds the remainders of use surfaces and a structured hearth, preliminarily datable to the early Bronze Age, and a large settlement area with use phases referable, on the basis of the initial analysis of the materials, to the early Iron Age.

Analysis of the stratigraphic sequence has led to the identification of a repetitive pattern representative of each "stage" of settlement and which, from bottom to top, consists of:

1. well constructed terracing work, with the sub-horizontal levelling of the detrital deposits;
 2. containment work to protect the settled area.
- They consist of:

a - dry wall structure standing on a horizontal surface at the foot of an escarpment inclined about 60-70°, conserved to a height up to 1.5 metres and a length of 14 metres (Fig.8).

b - 50-80 cm deep trenches above the terraced area, filled with stones and blocks presumably to hold a continuous series of wooden posts;

3. the development of a settlement surface which evolves during the use of the structures. It is generally organic, consisting of allochthonous, micaceous, mud sediment from alluvial deposits on the valley floor and medium clastic sand found on site;

4. settlement units distributed on the terraced area (Fig.9). Up to now two single structures have been identified: the first, structure A, is composed of a quadrangular hut, where the central axes measure about 6.4 x 5 metres, furnished with a *cuvette* hearth in a position halfway along the larger axis in the proximity of the south wall. The foundations for the perimeter wall are plainly visible along the south and north sides with the presence of a curved trench filled with equally sized clastic stones and blocks; on the east and west sides straight trenches have been recognised which are filled with blocks and clastic rocks (often tiled and situated with the larger axis placed orthogonal to the direction of the structure), visible at the level of the settled layer marked, on the west side, by tabular blocks placed at equal distances. The hut has a central posthole that was used to support the roofing materials. A second partially conserved structure, with a semicircular shape (structure B), is to the south of structure A. The total absence of elements that are clearly pertinent a habitat (hearths, use surfaces etc.), as well as its small size, (about 3 x 2 metres) makes its interpretation difficult (auxiliary structure?).

5. detrital filling materials often with a component of anthropic origins (rubbish etc.) which denote the reconstruction, abandonment or change in the use of the use surfaces. These backfill materials are often

alternated, on the slopes of the terracing, with colluvial soil.

6. slope deposits constituted of organic sandy colluvial material with a prevalent detrital skeleton often including isolated fallen blocks that denote the slow degradation of the structures, and by detritus of varying granulometry, in clastic strata and including the main mass of the collapsed wall structures.

The evidence collected from the excavations carried out to date, document the persistent habitation of the site, which embraces long periods of settlement during a period ranging from the Bronze to Iron Ages.

The settlement and the control of a morphological context such as the detrital cone, implies adaptation priorities and the use of specific construction models, that in part can be compared to those in similar contexts (alluvial cones, slope).

The data collected to date permits the outlining, although with gaps due to erosion and recent quarrying activities, of a settlement model that sees the colonisation of dynamic morphological contexts like detrital cones through systematic and repeated terracing work.

This technique, although applied using different materials in the various phases (mainly with the use of wood in the early Bronze Age and dry stone walls in the following phases), and even though it required continual repair work, it still allowed the settlers to take possession of valley floor territory and avoid the risks of the flood plain. It is not by chance that similar strategies were adopted from the middle Neolithic Age and were later established as the model necessary for human settlement and the agricultural exploitation of slope territory.

SUMMARY - The site is situated north of Trento on the hydrographic right of the stream Noce, at the base of the rock walls of the Fai della Paganella mountain plateau, at an altitude of about 250 m above sea level. Quarrying on the detrital cone led to the identification of the archaeological layers that were subject to emergency excavations in the spring of 1992. Part of a quadrangular structure was brought to light which, on the basis of archaeological materials, can be attributed to the early Bronze Age. Several phases of reconstruction and use were recognised. The oldest phase saw the first restructuring of the slope, with the preparation of a subhorizontal surface through the removal of deposits situated above and their repositioning below against a wooden containment structure. On the subhorizontal surface the first habitation was built with a circular hearth. In 1995, the continuation of quarrying, allowed a large neighbouring area to be excavated. Here the anthropic deposits conserved considerable proof of a structured settlement system, (which are still being excavated), which seems to document persistent habitation until the early Iron Age. This is a complex consisting of three terraced areas, with containment wall structures that at some points reaches a height of 1.5 metres. One in particular has a residual length of 14 metres. On the three terraces there is evidence of settlement structures (the remains of hearths with basal preparation and postholes). The data collected to date permits an outline of a settlement pattern to be drawn for the La Rupe site, that sees the colonisation of dynamic morphological contexts like detrital cones through systematic and repeated terracing work. This solution, although it requires continual reconstruction work, allowed the possession of territory on the valley floor without the associated risks of the flood plain.

RIASSUNTO - Il sito è localizzato a nord di Trento, sulla destra idrografica del torrente Noce, alla base delle bancate rocciose dell'altipiano di Fai della Paganella, a circa 250 m s.l.m. Lavori di cava su un conoide detritico hanno permesso di individuare i livelli archeologici indagati con uno scavo di emergenza nella primavera del 1992. E' stata messa in luce parte di una struttura abitativa a pianta quadrangolare attribuibile, in base ai materiali archeologici, ad un momento antico dell'età del Bronzo. Sono state riconosciute più fasi d'uso e di ristrutturazione. La fase più antica vede una prima sistemazione del pendio, con l'approntamento di una superficie suborizzontale tramite l'asportazione di depositi situati a monte e la loro rideposizione a valle a ridosso di una struttura lignea di contenimento. Sulla superficie suborizzontale si innesta quindi il primo piano di abitazione dotato di focolare circolare. La prosecuzione dei lavori di estrazione ha permesso di indagare a partire dal 1995 un'ampia area limitrofa alla precedente. I depositi antropici hanno qui conservato consistenti resti di un sistema insediativo strutturato (ancora in corso di scavo), che sembra documentare una persistenza abitativa fino alla prima età del Ferro. Si tratta di un complesso costituito da tre aree terrazzate, con strutture murarie di contenimento che conservano in alcuni punti un'altezza di m 1,50. Una in particolare si sviluppa per una lunghezza residua di circa m 14. Sui tre terrazzi insistono evidenze di strutture insediative (resti di focolari con preparazione basale e buche per palo). I dati ricavati fino a questo momento dalle indagini nel sito de La Rupe permettono di delineare un modello insediativo che vede la colonizzazione di contesti morfologici dinamici quali i conoidi detritici mediante sistematiche e reiterate opere di terrazzamento. Questa soluzione, pur necessitando di continui interventi di risistemazione, permetteva tuttavia la presa di possesso dei territori di fondovalle evitando i rischi della piana esondabile.

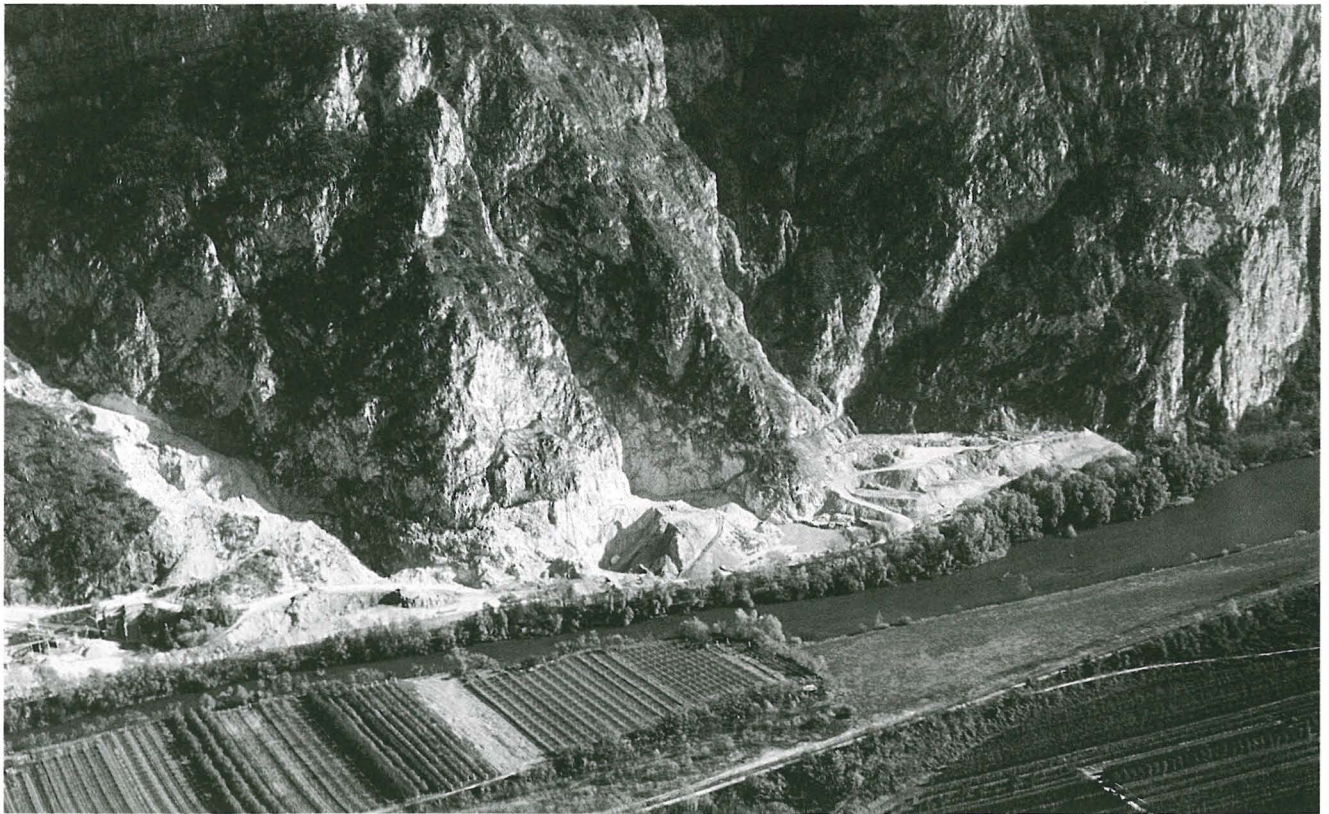


Fig. 1 - Aerial photograph of the La Rupe site. In the centre the deposit saved from quarrying work ("Conc. S.M.A. n.12-283 del 20.11.1995").

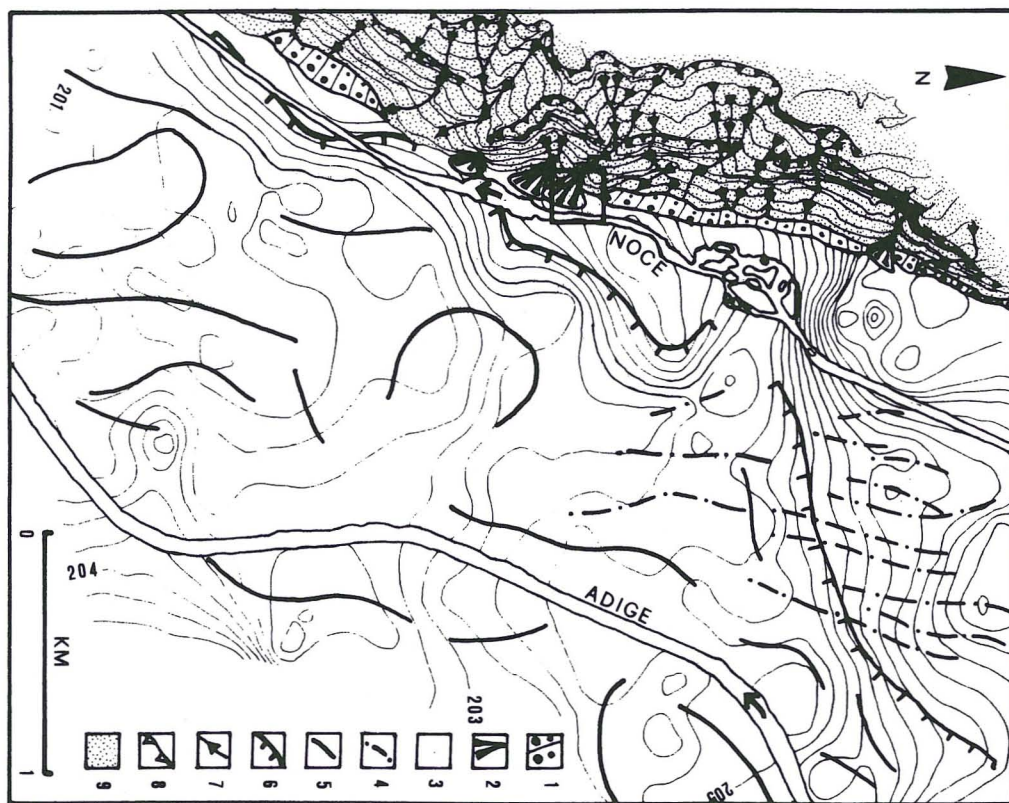


Fig. 2 - The geomorphological setting of the site. Legend: 1. Scree slope; 2. Talus cone; 3. Alluvial deposits from the Adige and Noce; 4. Traces of extinct watercourses with intertwined channels of the stream Noce; 5. Traces of an extinct watercourse of the River Adige; 6. The edge of a fluvial erosion escarpment; 7. Rock gorge with detritus discharge; 8. Edge of a degradation escarpment; 9. Pre-Quaternary substrate. The equidistance of the curve of the valley floor level is 0,5 metres, while that relating to the pre-Quaternary substrate is 50 metres. The site is marked by the square.

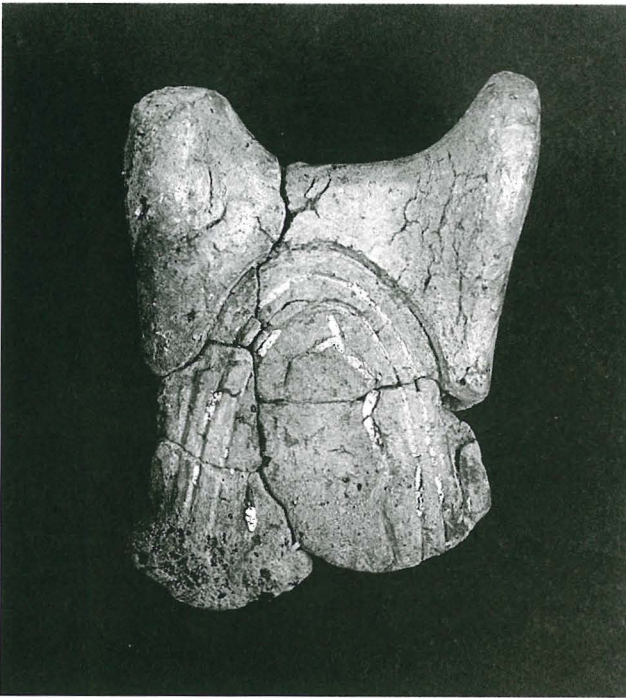


Fig. 3 - Sector A - Elbow handle with raised lateral pieces and incised decorations filled with white paste.



Fig. 4 - Sector A - Plan of the oldest phase. A dotted line highlights the hearths. The black square indicates the position of the elements in green stone.



Fig. 5 - Sector A - Loose ceramic sherd foundations at the base of a hearth from the oldest phase.

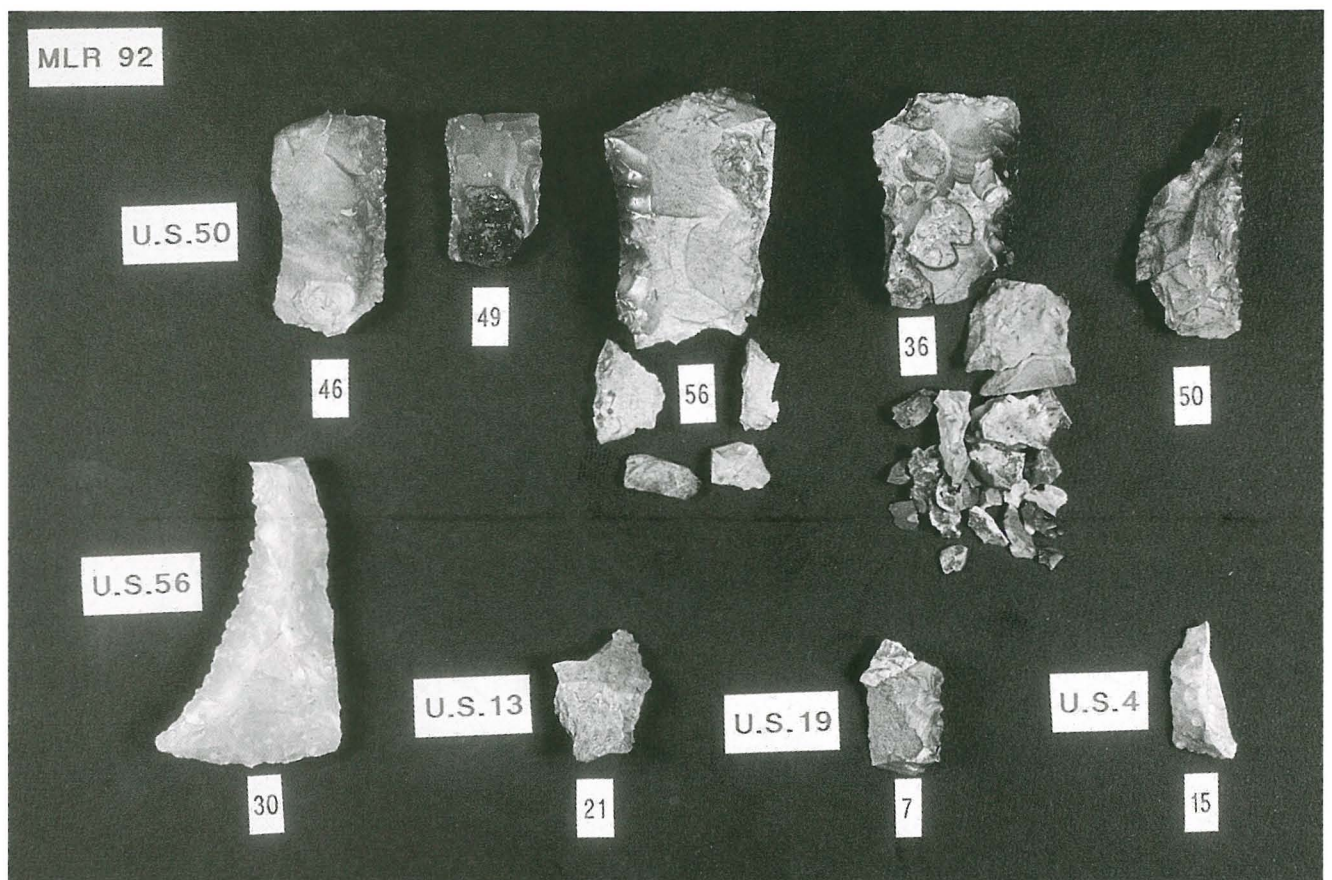


Fig. 6 - Sector A - Group of sickle flint blades. Several present evident traces of heat alteration.



Fig. 7 - Sector A - Plan of the most recent phase. The hearths are marked with a dotted line. The black square indicates the position of the green stone elements.



Fig. 8 - Sector D – View from the southeast of the terrace with the containment wall. In the background the edge of the deposits referable to the terracing of the early Bronze Age.

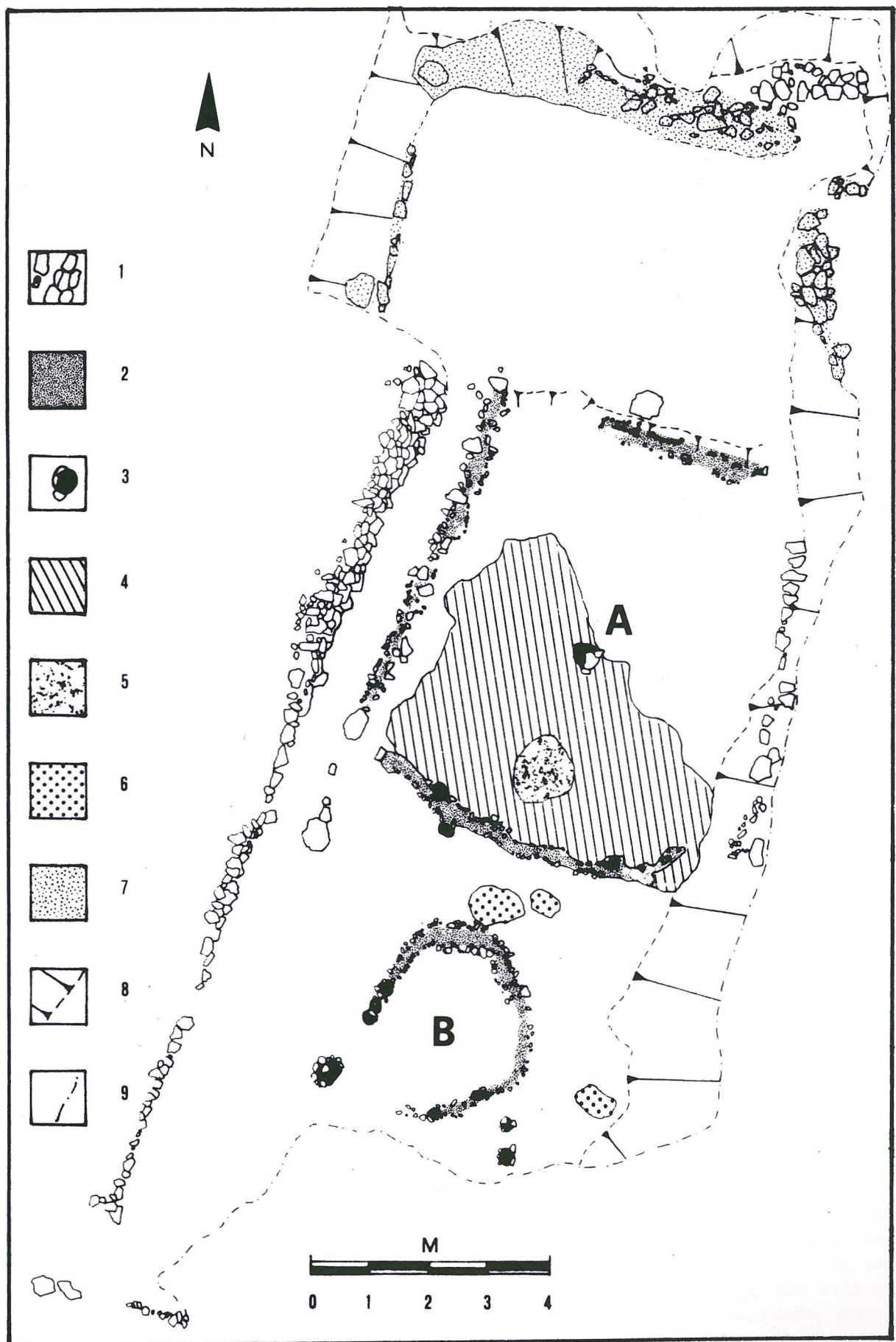


Fig. 9 - General plan of sector D. Legend: 1: Stones and blocks with a structural function (support walls and backfilling); 2. Trench for the wooden posts; 3. Posthole; 4. The settlement layer. 5. Hearth; 6. Holes; 7. Structures relating to the oldest phase (trenches with filling and support structure); 8. Contour lines; 9. Excavation limits. Hut A and B are highlighted.