

# Debates de Arqueología Medieval



En este número:

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**DEBATES DE ARQUEOLOGÍA MEDIEVAL**  
**Nº 3 (2013)**

# DEBATES DE ARQUEOLOGÍA MEDIEVAL

## Nº 3 (2013)

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La revista Debates de Arqueología Medieval nace con la pretensión de estructurar toda una serie de intereses que muchos de nosotros tenemos respecto a la Arqueología Medieval, tanto en lo que se refiere a cuestiones metodológicas como, sobre todo, en torno a los debates históricos que se generan a partir de la investigación.

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# FIRST ARCHAEOLOGICAL DATA FROM AN ALPINE PASTORAL ENCLOSURE AT VAL PORÉ (VAL DI SOLE, TRENINO, ITALY)

Primeros datos arqueológicos recogidos en un recinto pastoril alpino en  
Val Poré (Val di Sole, Trentino, Italia)

FRANCESCO CARRER\* & DIEGO E. ANGELUCCI\*\*

**Abstract:** An archaeological research project was recently started in the Alpine upland of Val di Sole (Trentino, Italy) to study the pastoral exploitation of mountain land and its relationships with landscape and environmental evolution. The project, called ALPES ("Alpine Landscapes: Pastoralism and Environment of Val di Sole"), has included the survey of two upland valleys (Val Molinac and Val Poré) and the identification of various sites and structures — enclosures, huts and rock-shelters — mostly related to shepherds. Detailed topographic survey and first stratigraphic tests were performed at the enclosure called MZ005S (2257 m altitude) sporadically used until the mid 20<sup>th</sup> century AD. The evidence collected suggest a long term human occupation of the area: stray prehistoric evidence was found; radiocarbon dates gave results to the 7<sup>th</sup>-8<sup>th</sup> and to the 15<sup>th</sup> century AD; and the assemblage collected indicates occupation of the site during the 16<sup>th</sup>-17<sup>th</sup> century AD. These first data provide insights on the use of the site, on the relationships between landscape evolution and human exploitation of the upland and on some aspects of the cultural and socio-economic context in the late medieval and early modern periods in this sector of the Alps.

**Keywords:** Alps, upland, pastoralism, enclosures, Trentino.

**Resumen:** Las montañas de Val di Sole (Trentino, Italia) constituyen el espacio en el que se enmarca un proyecto de investigación arqueológica, aún en fase inicial, que se propone el estudio de la explotación pastoril de alta cota y su interrelación con la evolución del paisaje y del medio ambiente. El proyecto, denominado ALPES ("Alpine Landscapes:

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Francesco Carrer & Diego E. Angelucci: «First archaeological data from an alpine pastoral enclosure at Val Poré (Val di Sole, Trentino, Italy)»

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Pastoralism and Environment of Val di Sole"), ha incluido el examen de dos valles alpinos (Val Molinac y Val Poré), en los que se han localizado numerosas enclaves y estructuras (recintos, cabañas y abrigos), en su mayor parte relacionados con la actividad de pastoreo. En el recinto MZ005S (2257 m. de altitud), utilizado hasta mediados del siglo XX d.C., se ha llevado a cabo un pormenorizado levantamiento topográfico, así como catas estratigráficas. Las evidencias allí recogidas indican una prolongada ocupación humana del área: se han encontrado indicios de ocupación prehistórica; se han averiguado dataciones, mediante procedimientos de radiocarbono, que la circunscriben a los siglos VII-VIII y XV d.C.; y se han hallado conjuntos arqueológicos que indican la ocupación del lugar a lo largo de los siglos XVI-XVII d.C. Estos primeros datos permiten dilucidar la utilización del lugar, las interrelaciones que se establecen entre la evolución medio-ambiental y la explotación de las tierras altas, al tiempo que aclara rasgos del contexto cultural y socioeconómico en la baja Edad Media y la primera Edad Moderna en estas comarcas de los Alpes.

**Palabras Clave:** Alpes, tierras altas, pastoreo, recintos, Trentino.

## 1. Archaeology of pastoralism in the Italian Alps: the ALPES project

The interest for pastoralism in European archaeology is related to the diffusion of new archaeological ideas during the late 1960s and early 1970s (FLEMING: 1972-1973), which acknowledged that the core of pastoral activity takes place and took place in upland prairies during the summer. This has stimulates the development of archaeological and ethnoarchaeological research in mountain areas, in order to tackle the specific issues of past seasonal herding (CHANG and KOSTER: 1986; NANDRIS: 1985; BARKER: 1981). Between the 1990s and the early 2000s, several archaeological projects focusing on pastoralism and upland environment started in various European mountain areas, particularly in the Pyrenees (RENDU: 2003, GASSIOT et alii: 2009) and in the Alps (HEBERT and MANDL: 2009; WALSH, MOCCI and PALET MARTINEZ: 2007; HORVAT: 1999). These projects included the survey of high altitude sample areas and the excavation of sites, and provided critical data on the origin and evolution of Alpine pastoralism and transhumance, testifying a stable colonization of upland pastures, even since the 3<sup>rd</sup>-2<sup>nd</sup> millennium BC. Unfortunately, few researches on these subjects have been undertaken in the Italian Alps so far (MIGLIAVACCA, SAGGIORO and SAURO: CESCO FRARE and FOGLIATA: 2012; SALSA: 2002; VAROTTO: 1997). Therefore, archaeological data about the Italian Alpine uplands are scarce (MARZATICO: 2007), biasing our knowledge of ancient herding strategies in the southern Alps.

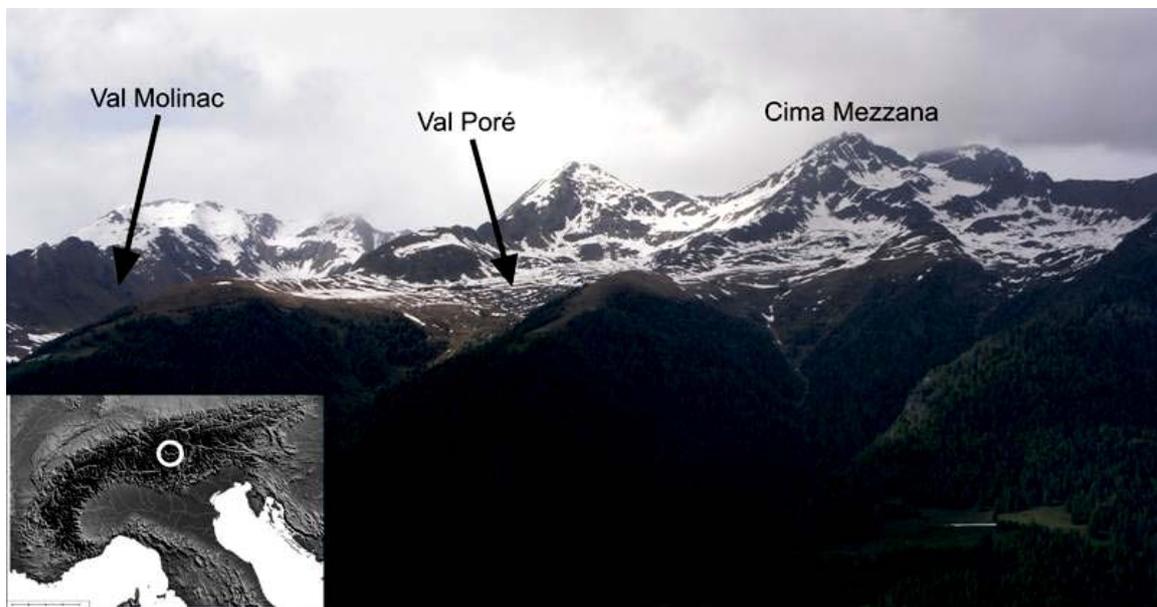
The ALPES ("Alpine Landscapes: Pastoralism and Environment in Val di Sole") research project aims at filling this gap in upland research. The ALPES project, designed by

the two authors, started in 2010 and deals with the archaeological evidence<sup>1</sup> of human-environment interactions in Val di Sole (Trentino province, Italian Alps). Two upland valleys were investigated in the first survey campaigns of the ALPES project: Val Molinac and Val Poré, both comprised in the territory of Ortisé (municipal district of Mezzana).

### *1.1 Val Molinac and Val Poré*

The area under examination corresponds to the upper part of the valleys named Val Molinac and Val Poré. They are located along the left slope of Val di Sole (Fig. 1), south of the Cima Mezzana massif, and were surveyed in between c. 2000 and 2500 m altitude. Both valleys are approximately N-S oriented, are tributaries of river Noce (the main watercourse of Val di Sole) and are subject to a high-altitude, relatively cold and humid climate.

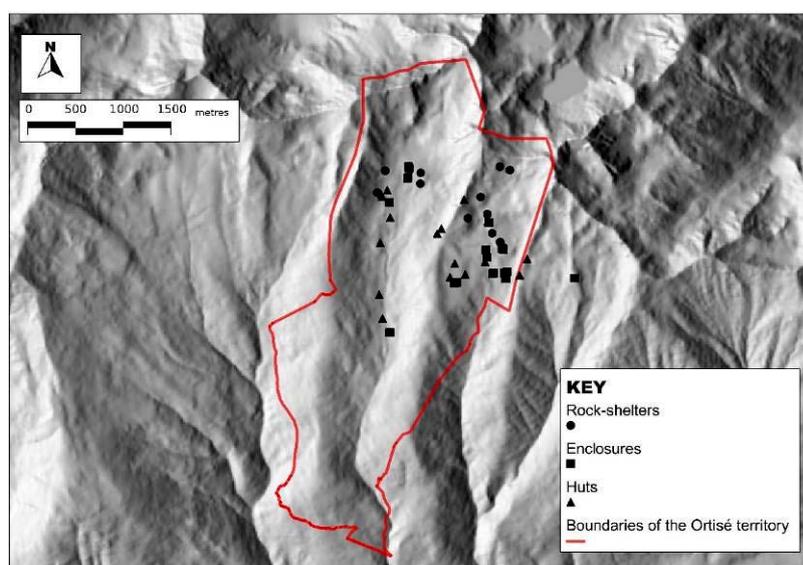
Geologically, metamorphic rocks prevail all around the examined area. The main type of rock that outcrops in the valleys is middle-grained paragneiss (featuring micas, kyanite and garnets), which embeds large masses of mid- to grain-sized orthogneiss (featuring quartz, feldspars and micas), thin bodies of quartzite, as well as amphibolites and peridotites. Under a geomorphological point of view, local morphologies are mainly due to past (Pleistocene and early Holocene) glacial action and to 'periglacial' processes — for instance a huge, inactive, rock-glacier still occupies the east side of the head of Val Poré.



**Figure 1. General view of the area under examination and location of Val di Sole (bottom right) in the Alps.**

<sup>1</sup> The ALPES project has only dealt with archaeological data so far. Archive survey and ethnographical research will be undertaken in the next phases of the project.

The first archaeological fieldwork in the area took place during the summer of 2010 and included the survey of the two valleys above 2000 m elevation. Every archaeological trace visible on the ground was recorded and positioned through a handheld GPS. Each evidence was coded by an alphanumeric identifier (ID) composed of two letters (e.g. MZ = Mezzana municipal district), a three digit sequence (e.g. 001, 002 etc.) and a letter describing the type of evidence (S = structure; R = remain; etc.). Over 80 archaeological locations were recorded, measured, described and photographed. Eventually, a GIS platform was created in order to manage the collected spatial and attribute data. The remains of dry-stone structures were the most relevant human evidence recorded during the survey campaigns, and they were the main focus of the first analytical phases of the ALPES project (Fig 2).



**Figure 2.** Location of huts (triangles), enclosures (squares) and rock-shelters (circles) in Val Molinac and Val Poré. The surface enclosed by the line corresponds to the land belonging to the community of Ortisé.

### *1.2 Categories of dry-stone structures: huts, enclosures, rock-shelters*

Several dry-stone structures have been recorded in Val Molinac and Val Poré. The most relevant structures are enclosures, huts and structured rock-shelters (Fig. 3). The huts (called *bait* in local dialect) are dry-stone rectangular or ovoid structures, with a limited inner surface (3-10 m<sup>2</sup>). The walls can be preserved at various heights or be a scant remain over ground surface. Some huts may preserve a roof (or a residue of it), made up of wood posts and planks. The enclosures (*mandrie* in local dialect) are dry-stone structures that delimit an area for stabling livestock. The surface delimited by the enclosures is variable in size — from c. 50-60 to 300-400 m<sup>2</sup> — and shape — squared, rectangular, ovoid or irregular. The enclosure walls sometimes reach 1 m height but the majority of them are only slightly visible on the ground. Besides, some enclosures can be aggregated together, giving compound structures that sometimes may also include a dry-stone hut. The third category

recorded is that of rock-shelters. Basically, they are sheltered spaces under more or less large boulders and are closed by an ephemeral stone wall. Some of the rock-shelters may have been used as provisional refuges, while the smallest ones may have been storage places.

The structural differences between the three site categories indicate that they may have been related to different strategies of exploitation of upland pastures, and further analyses were conducted using GIS tools and geo-statistics, in order to assess the locational pattern of each site category.



**Figure 3. Three examples of the dry-stone structures detected in Val Molinac and Val Poré: the hut MZ015S (top left); the enclosure MZ003S (top right); and the rock-shelter MZ075S (bottom).**

### *1.3 Locational patterns of the sites: preliminary observations*

The first results provided by exploratory data analysis through GIS tools indicate that the enclosures, the isolated huts<sup>2</sup> and the rock-shelters refer to different locational patterns that were influenced by distinct environmental variables. Rock-shelters seem to be placed in areas with higher elevation and slope value than the enclosures, while the position of the enclosures appears to be statistically more influenced by the distance from watercourses than the huts (FORADORI: 2009-2010). In order to explain this pattern, further analyses were undertaken by using geo-statistical methods and by comparing the patterns of these site categories with the settlement pattern of current summer dairying sites (*malghe* in local dialect) of Val di Fiemme (Trentino province). This experiment shows that the locational

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<sup>2</sup> The huts that are comprised in the aforementioned compound structures have been considered as a part of the structures and have been analyzed within the enclosure category.

pattern of the enclosures matches the one of the current *malghe*, while that of rock-shelters does not; the isolated huts, instead, exhibit a more complex locational pattern.

An ethnoarchaeological fieldwork focused on the current *malghe* of Val di Fiemme provided useful data to explain these results. *Malghe* are specialized summer dairying sites (KEZICH and VIAZZO: 2004), and an in-depth analysis of the correlation between dairying activity and mountain environmental variables suggested that their location is the most suitable for cheese-making. It was therefore argued that the *malghe* settlement pattern is influenced by their dairying function. These inferences enable to assume that the enclosure category, that has the same locational pattern of *malghe*, was probably related to dairying economy (CARRER: 2013).

The next research phase consisted of the archaeological excavation of one enclosure, in order to find markers that may confirm the dairying function of this category of structure. As already said, some enclosures are aggregated in compound structures, and therefore the first step was the identification of the most suitable compound structure for carrying out archaeological fieldwork.

## 2. The case-study: MZ005S

During the first survey campaign, a huge compound structure —later named MZ005S— was detected in Val Poré. Later campaigns partly concentrated on the study of this site (Fig. 4). The site MZ005S is located in the upper part of Val Poré, at 2257 m altitude, just above the slope break that delimits the head of the valley. The enclosure is set inside a gentle, relatively wide, depression near the valley talweg, partly filled with glacial and glacio-contact sediments, and also featuring a huge 'periglacial' block-stream few tens of meters to the east.



Figure 4. View of the MZ005S site from south, during the topographic survey campaign.

## 2.1 Morphology

MZ005S is composed of three dry-stone enclosures and one (or two) small huts. The technique used to build the walls is rather simple and consists of placing the stones with their major axis perpendicular to the wall direction (see also Fig. 6), in order to improve the stability of the construction without digging any foundation trench. The size and shape of the stones clearly shows that they were carefully selected, with the preferential use of elongated, slightly flat, orthogneiss slabs whose intermediate axis measures 15-20 cm. Some sectors of the structure are poorly visible on the ground surface, while other parts (in particular the recent hut) are well preserved, though partly collapsed.

The shape of the whole structure is irregular. The two main enclosures have a squared-like shape and one corner in common. One hut, which seems to partially overlay the basis of another hut, is placed at this same corner. The third enclosure is smaller and less visible than the other two, and its shape is harder to identify.

## 2.2 The topographic survey

Given its complexity, MZ005S and its surroundings were topographically surveyed and its structural elements described, in order to reconstruct their physical relationships (PISONI: 2010-2011). Field activity concerned MZ005S as well as other surrounding structures: another enclosure coded MZ004S, a small isolated hut named MZ048S and an artificial hollow coded MZ082S. The local topography was recorded as well, in order to create a map representing the microrelief of the area through CAD software (Fig. 5).

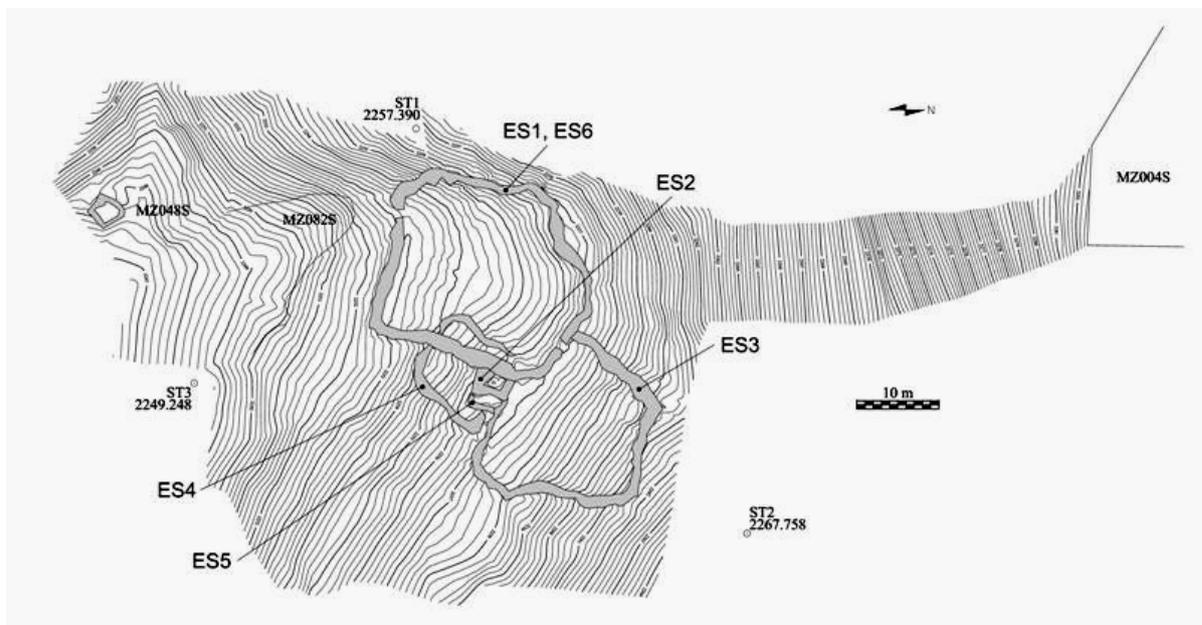


Figure 5. Topography of the MZ005S site and its surroundings (elaboration by Denis Pisoni and Fabio Cavulli).

### 2.3 Identification of structural elements (ES) and phases

MZ005S is made up of distinct dry-stone features. Their analysis was carried out by identifying the structural elements (ES, see BROGIOLO 1988) that compose the site and by defining the building techniques for each of them and the stratigraphic relations among them. Six main structural elements were defined (ANGELUCCI et alii: 2013; PISONI: 2010-2011).

- ES1-ES6. A large enclosure in the south-western sector of MZ005S (inner surface: 402 m<sup>2</sup>). ES1 is the youngest phase, with a building technique characterized by the presence of small-medium slabs (40-60 cm — Fig. 6), while ES6 is the earliest phase, consisting of larger stones.
- ES2. A 4.5-m<sup>2</sup>-large hut located in the centre of the compound structure. The hut is well preserved and was abandoned in recent times, probably around the early 20<sup>th</sup> century.
- ES3. A large enclosure (inner surface: 256 m<sup>2</sup>) in the north-eastern part of the site. Its north-western side is poorly preserved, while the south-western one is in common with ES6.
- ES4. A small ovoid enclosure (approximate enclosed surface: 77 m<sup>2</sup>), badly preserved, located in the central area of the compound structure. The building technique is rougher than those of the other ES.
- ES5. A simple 4-m-long row of stones, slightly visible on the ground.

The data have been analyzed by applying stratigraphic principles and concepts to the structural elements in order to define specific building phases for the entire site («archeologia dell'architettura», see BROGIOLO: 1988).



**Figure 6. An example of the building technique at MZ005S: the wall of structural element ES6, with elongated slabs placed perpendicular to the wall axis.**

The physical relationships among the structural elements described above led to the identification of five phases, which correspond to the main building episodes (Fig. 7):

- Phase 1. The first structural element built in the area is ES4 (the small ovoid enclosure).
- Phase 2. ES4 is abandoned, and the larger enclosure ES6 is built. Its setting at the southern part of the site may indicate a functional relationship with the nearby artificial depression MZ048S. The structural element ES5 may also be attributed to this phase and can be interpreted as the remnant of a dry-stone hut. Unfortunately, the absence of clear physical relationships between ES5 and ES6 does not enable to clarify the actual stratigraphic relationship between these structural elements.
- Phase 3. A new enclosure, ES3, is built at the northern part of the site. The existence of an entrance between ES6 and ES3 may point to the contemporary use of these two enclosures.
- Phase 4. The southern enclosure is restored with carefully arranged smaller slabs (ES1). The communication between the southern and the northern enclosure (ES3) is closed, thus suggesting a loss of functionality of the northern enclosure.
- Phase 5. The last structure to be built at MZ005S is the hut coded ES2, set in the central part of the site and overlaying ES1 and ES3. The ES2 hut is probably coeval to the last exploitation phase of the nearby ES1 enclosure.

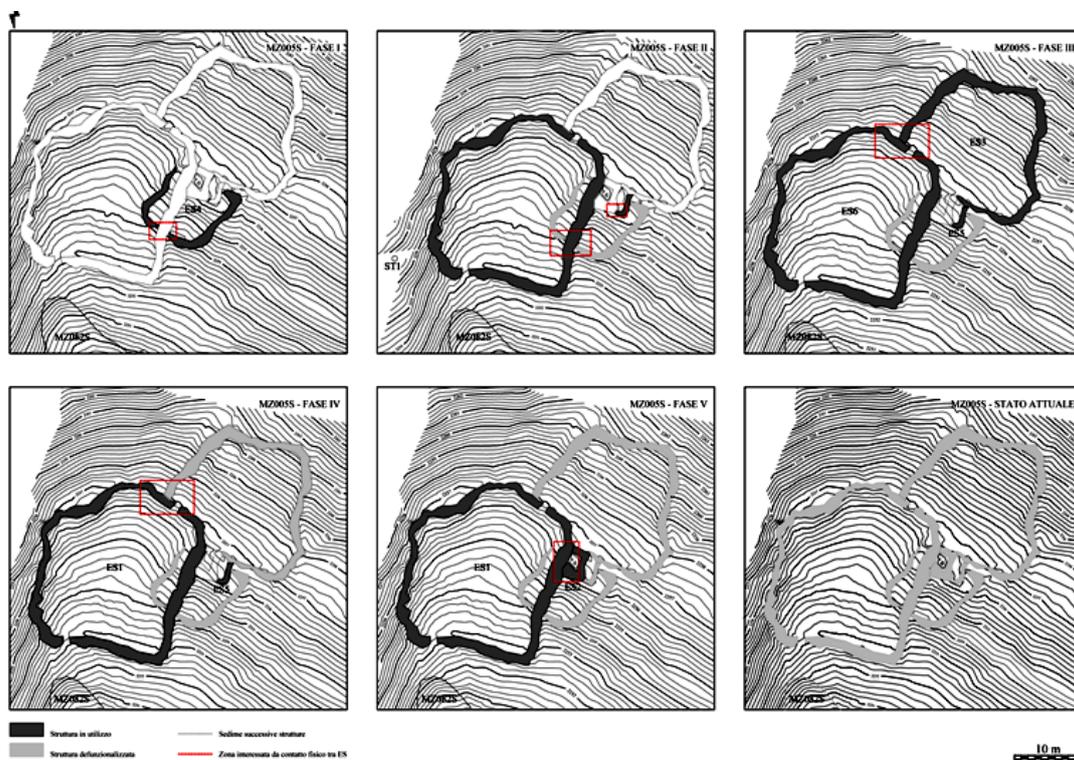


Figure 7. The construction phases of the MZ005S site (elaboration by Denis Pisoni).

### 3. The test pits

After testing the thickness of the deposit by hand-augering, two test pits were dug at the site, in 2011. Test pit T1 is located inside the ES4 enclosure, just in front of ES2 hut, while test pit T2 was dug within the ES3 enclosure.

#### 3.1 Stratigraphy

Thin soil profiles developed on sandy-silt parent material were put to light in both the test pits, T1 and T2. In the former, below the present A horizon (excavation unit 2), an organic, fairly thick, buried 2Ab horizon (unit 3) outcrops. Its top surface probably corresponds to the original location of the archaeological artefacts and ecofacts collected from this test pit. The horizon 2Ab gradually passes to a poorly developed 2B horizon (unit 4) and to the local parent material of horizon 2C (units 5 and 6), silty-loam sediment with common stones. The succession exposed from the test pit T2 is the same but for the occurrence of a C horizon intercalated in between the horizons A and 2Ab. The buried soils recorded in the test pits (horizons 2Ab, 2B and 2C) are the result of a relatively long-lasting phase of soil formation that enhanced the weathering of local parent material, a silty-sand deposit derived from the superficial outwash of former glacial sediments and of alteration products from local metamorphic bedrock. The formation of the buried soil was interrupted by the accumulation of more recent slope sediment, which is documented by the horizon C of the test pit T2 — its absence inside the test pit T1 is most probably due to the fact that the sediment was laid down after the construction of the northern enclosure (structural element ES3), whose southern wall acted as a sort of dam for its accumulation southwards (downslope). A further, poorly developed, A horizon later formed from this slope deposit. The stratigraphic evidence thus indicates that the MZ005S area had been in stable conditions for a long time span, probably since glacial retreat in the early Holocene; however, slope activity had taken place more recently and for a short time when the enclosure had already been built, perhaps during the Little Ice Age cold peak.

#### 3.2 The archaeological assemblage

The T1 test pit yielded a series of artefacts and ecofacts; only ecofacts (namely charcoal fragments) were found in T2 test pit. Archaeological finds in T1 were collected from unit 2 and unit 3; some charcoal fragments were also found at the top of unit 4 (even if clearly infiltrated from the overlying unit 3). The artefacts are not abundant<sup>3</sup> but quite diverse: «*invetriata graffita*» (glazed and engraved) pottery, a glass bead, three iron nails and two iron rivets, as well as few flint flakes and *debris* fragments, some of which thermoaltered (Fig. 8). The flint flakes are imported from outside the area of Ortisé, as there are no flint outcrops along the northern slopes of Val di Sole. The «*invetriata graffita*»

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<sup>3</sup> The presence of few artefacts depends mainly on the limited surface of the test pit. However, it may also depend on specific taphonomic processes that take place in the uplands, as well as on the scarcity of objects exploited and abandoned by herding groups in their seasonal sites (WALSH et alii: 2005)

pottery has been compared to similar artefacts found in Trentino from archaeological contexts dating to the 16<sup>th</sup> — 17<sup>th</sup> century. The most remarkable object found at MZ005S is a glass bead collected from the test pit T1, unit 3. The bead is cylindrical, measures 6.2 mm by 5.8 mm and is made of colourless glass with greenish shade and nine white, opaque, filaments. The bead corresponds to the so-called «gooseberry bead» type, which has been recorded on the Gnalić shipwreck, sunk along the Croatian coast during the 16<sup>th</sup> century AD, as well as at African sites dated to the 16<sup>th</sup>—17<sup>th</sup> century AD and in north American colonies of the 17<sup>th</sup> century AD. It has been suggested so far that this kind of bead is a Venetian product (MEDICI et alii in press).



**Figure 8.** Some finds from the T1 test pit at MZ005S: flint flake (left); glass bead (centre); «glazed and engraved» potsherds (right). Bar scale = 1 cm; all pictures by Paolo Chistè.

### 3.3 Ecofacts and radiocarbon dating

Charcoal fragments were collected both during excavation and through sieving. Preliminary botanical determination indicates the presence of spruce (*Picea excelsa*) and larch (*Larix decidua*). Three of the charcoal fragments were employed for radiocarbon dating (see Table 1 and ANGELUCCI et alii 2013 for details).

**Table 1.** MZ005S. Radiocarbon dating

sample	lab. code	provenance	material	date <sup>14</sup> C (a bp)	δ <sup>13</sup> C (‰)	age 1σ (cal AD)	age 2σ (cal AD)
MZ005S_8	DSH3068	test pit T1, contact between units 2 & 3	<i>Picea/Larix</i>	46±112	-18±5	the date cannot be calibrated	
MZ005S_9	DSH3067	test pit T1, unit 2	<i>Larix/Picea</i>	514±36	-20±5	1405-1438	1321-1349 (13,4%) 1391-1447 (86,6%)
MZ005S_10	DSH3069	test pit T2, unit 203	<i>Picea/Larix</i>	1307±38	-50±5	663-712 (70,5%) 746-767 (29,5%)	652-776

The sample MZ005\_8, which was collected at the interface between unit 2 and unit 3, gave a 20<sup>th</sup> century date<sup>4</sup>. It clearly refers to the last phases of exploitation of the site,

<sup>4</sup> This charcoal fragment is probably infiltrated as a result of bioturbation. As a matter of fact, the deposit of test pit T1 is a poorly-developed soil profile, thus a partly open context as far as site formation is concerned.

around the mid-20<sup>th</sup> century, as it was confirmed by the inhabitants of the hamlet of Ortisé. The sample MZ005\_9 was found in unit 2 and gave a 14<sup>th</sup> — 15<sup>th</sup> century AD date, slightly earlier than the chronology of the «*invetriata graffita*» pottery and of the «gooseberry bead». Eventually, the sample MZ005\_10, collected from the test pit T2, gave a 7<sup>th</sup> — 8<sup>th</sup> century AD date. It is worth noticing that the last two dates are similar to those provided by charcoal samples coming from soil profiles of surrounding areas (Val di Peio, Val di Rabbi), the presence of which was explained as the result of intensification of the practice of clearing woods in the upland (1800-2200 m) from the late 8<sup>th</sup> — early 9<sup>th</sup> century AD, and at mid altitude (1500-1800 m) from the 15<sup>th</sup> century AD (FAVILLI et alii: 2010).

#### 4. Discussion

The data provided by the ALPES research are still too scarce to suggest any inference, even if preliminary.

Nevertheless, they contributed to point out specific issues related to the human occupation of upland milieus.

##### 4.1 Continuity or discontinuity?

Two test pits (T1 and T2) have been excavated inside the MZ005S compound structure. The radiocarbon measures from the test pit T1 are chronologically placed in the 20<sup>th</sup> century and in the 14<sup>th</sup>-15<sup>th</sup> century AD, while that of the test pit T2 dates to the 7<sup>th</sup>-8<sup>th</sup> century AD. The artefacts collected from the test pit T1 can be referred to two different periods: prehistory (the flint flakes) and 16<sup>th</sup>-17<sup>th</sup> century AD. Although these data are not sufficient to propose inferences about the origin and the evolution of MZ005S, they give a snapshot over a scenario of long-lasting exploitation of the examined upland area. They show that this mountain valley was occupied during the late medieval and post-medieval period, and probably in early medieval times<sup>5</sup>. But this evidence does not necessarily imply the continuous occupation of the area for hundreds of years. As a matter of fact, some of the radiocarbon dates (7<sup>th</sup>-8<sup>th</sup> century and 15<sup>th</sup>-16<sup>th</sup> century AD), as previously pointed out, match the periods of intense exploitation of the mountain environment identified by other scholars in the same territory (FAVILLI et alii: 2010), which were both preceded and followed by phases of less intense exploitation or even abandonment.

The correlation between such information enable to identify two critical, research questions concerning the interactions between human groups and the upland environment: (1) whether human exploitation of high pastures was continuous or variable through different historical periods, and (2) how climate change influenced human activities in the Alps. The same issues have already been tackled in other territories, especially the French Alps (see WALSH, RICHER and DE BEAULIEU: 2006).

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<sup>5</sup> The flint flakes collected from the test pit T1 cannot be attributed to a specific prehistoric phase.

#### 4.2 Gender and social issues

The excavation of the test pit T1 provided some artefacts which occurrence needs to be discussed.

The presence of the glass bead from such a context was unexpected. The first analytical data indicate that the bead was probably produced in Venice, even if its occurrence in Italy as an archaeological find was not reported until now (MEDICI et alii in press). The occurrence of a glass bead in a pastoral site may address gender and social-economical issues regarding the local peasant community of the 16<sup>th</sup>-17<sup>th</sup> century.

As a matter of fact, the bead enables to assume the presence of shepherd women or dairy-women at the MZ005S site<sup>6</sup>. The key-role of women in the alpine uplands in the past is also documented by the famous «Cycle of Months» frescos (late 14<sup>th</sup> — early 15<sup>th</sup> century) at Torre Aquila (Castello del Buonconsiglio, Trento, Italy), that depicts the various rural activities for each month. The panel illustrating the month of June shows four women involved in dairying activities (Fig. 9): milking, preparing butter and preparing cheese (ŠEBESTA: 1996). This image testifies the important role of women in alpine pastoralism and dairying economy in the past (GRASSL: 1999), at least until the 19<sup>th</sup> century, when dairying became an important business for Alpine communities and men took control of upland pastures and dairies (VIAZZO and WOLF: 2001).



**Figure 9. The month of June of the «Cycle of Months» frescos (late 14<sup>th</sup> - early 15<sup>th</sup> century; Torre Aquila, Castello del Buonconsiglio, Trento — left) and a detail (right), showing four women carrying out dairying activities (photograph by A. Bednorz, 2009, © Castello del Buonconsiglio, Trento; no part of the image may be reproduced or transmitted in any form or by any means without the prior permission of Castello del Buonconsiglio).**

<sup>6</sup> However, the interpretation on who used or wore the bead is preliminary: it might also be part of a rosary (an object that became common in Catholic countries after Counter-Reformation) or even part of a male earring or necklace; besides, no significant inferences can be taken from single evidence provided by a small test pit.

The occurrence of the glass bead also addresses another socio-economic issue: the «purchasing power» of shepherds and dairymen (or dairy-women) in medieval and post-medieval times. As a matter of fact, the bead — as well as the «*invetriata graffita*» pottery found in the same excavation context — is a valuable object, whose presence at a shepherd enclosure at 2250 m altitude was unexpected. These data might point to the fact that the people who exploited the MZ005S site in the 16<sup>th</sup> and 17<sup>th</sup> century were not poor but had good economical conditions. The economical level of mountain peasants was also studied by important historians and ethno-historians, showing that some medieval and post-medieval alpine communities were fairly wealthy (see for instance ROSENBERG: 1988). These historical researches contributed to overcome the traditional perception of mountain areas as immutably poor and marginal. It seems quite interesting that the preliminary interpretations of the archaeological evidence match the reconstructions inferred from historical documents. However, a glass bead and a fragment of pottery are too few to propose gender or social interpretations.

#### *4.3 Research perspectives*

The issues that emerged from the first fieldwork campaigns will be tackled in the next years, as further archaeological investigations will be undertaken. New excavations will provide ecofacts and paleoenvironmental data for the reconstruction of human exploitation of upland environment in the past. The archaeological assemblages identified within these excavations will enhance the comprehension of alpine societies.

New archaeological investigations will also enable to tackle other issues, such as the dairying function of enclosure in the Val Molinaccio and Val Poré. This function has been assumed using ethnoarchaeological analogy (CARRER: 2013), but no clear archaeological evidence of milk-processing and cheese-making has been identified in the MZ005S site so far. The identification of clear markers that witness dairying activity in this site (or other sites) may stimulate the interest for the origin and the evolution of seasonal dairying, a topic that is rarely addressed by the archaeological research groups that deal with upland milieus.

Another important issue is the complex evolution of the compound structures, composed of several elements (enclosures and huts) aggregated together. The structural analysis of MZ005S enabled to recognize 5 different building phases, but the data collected in the test pits were not sufficient to date them. One of the main goals of the future archaeological research in this area will be the study of the origin and the history of these structures.

## **5. Conclusion**

The excavation of the MZ005S site, in the upland of Val di Sole, is the first systematic archaeological investigation of a pastoral enclosure in the Italian Alps. The archaeological assemblage collected at the site is rather poor, nevertheless it seems to confirm two inferences that clearly emerged from the researches undertaken in the French and Austrian Alps (see REITMAIER 2012): (1) that Alpine pastoral economy is much older than expected

and (2) that shepherds have contributed to shape the upland landscapes (often since the prehistoric period) by creating enclosures, huts and rock-shelters — widespread in the high altitudes of the Alps — and by controlling the vegetation and land system, both directly and indirectly. These new data from Val di Sole are promising for the archaeology of pastoralism, and the continuation of the ALPES project will help filling the gap on the knowledge of herding practices in the southern Alpine uplands.

Eventually, this research will also yield useful support to the insights of the anthropologists, historians and geographers that have investigated the evolution of Alpine socio-economical strategies in the last four-five centuries (see VIAZZO 1989). Archaeological data will provide information that is usually hard to find in historical sources. A stronger interaction among archive research, ethnography, historical and archaeological data — as well as environmental analysis — is needed to enhance the comprehension of past societies and economies, as well as their changes through time, and will be the key-point of the next ALPES project researches.

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