

Monte d'Accoddi and the end of the Neolithic in Sardinia (Italy)

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ABSTRACT – *The Prenuragic shrine of Monte d'Accoddi is probably the most comprehensive representation of prehistory in Sardinia, both because it was continuously frequented from the Middle Neolithic to the Early Bronze Age, and because it contains the most significant elements of tradition and innovation during the passage from the Neolithic to the Eneolithic. Previous studies have defined Monte d'Accoddi as an altar, a ziggurat, a temple, or a step pyramid, and a wide debate has been generated about its hypothetical genetic relationship, reconstructive hypothesis, and significance. This paper does not analyse the above issues, but draws attention to other controversial problems, such as chronology or less studied aspects such as crafts. New radiocarbon dating from sites in the South of Sardinia and recent data that has been published about craft production relating to the shrine allow us to date the building of the first monument (4000–3650 calBC) to the Ozieri facies, with the second shrine dating to the Sub Ozieri (3500–3000 calBC) facies.*

IZVLEČEK – *Prenuragijsko svetišče na Monte d'Accodi predstavlja verjetno najbolj celovit zapis prazgodovine na Sardiniji, saj je bilo obiskovano skozi ves čas od srednjega neolitika do zgodnje bronzne dobe, in ker vsebuje najpomembnejše elemente tradicije in inovativnosti v prehodu iz neolitika v eneolitik. Prejšnje študije so Monte d'Accodi opredeljevale kot oltar, zigurat, tempelj ali kot stopničasto piramido, in ustvarile so se številne razprave glede hipotetičnega genetskega odnosa, rekonstruktivne hipoteze in pomena spomenika. V članku se ne ukvarjam z analizo zgoraj navedenih vprašanj, ampak opozarjam na druge probleme, kot so kronologija in preostali slabše raziskani vidiki, npr. obrti. Objavljeni so bili novi radiokarbonski datumi najdišč iz juga Sardinije in podatki, ki se nanašajo na povezavo obrti s svetiščem, ki nam omogočajo datacijo prvega spomenika (4000–3650 calBC) v t.i. Ozieri facies in datacijo drugega spomenika (3500–3000 calBC) v t.i. Sub-Ozieri facies.*

KEY WORDS – *Sardinia; Neolithic; Eneolithic; chronology; sanctuary*

Introduction

One of the peculiarities of Sardinian prehistory is its continuity, which characterises cultural development in the Neolithic and Eneolithic; between the VI and III millennium BC – notwithstanding its prominent position in the network of Mediterranean contacts, thanks to its insularity and to the filtered and indirect cultural contribution from elsewhere, Sardinia maintained strong traditions and a measured evolution. Only well into the Eneolithic did the impact with external cultural movements assume sufficient proportions to provoke a regression and depletion of the native facies.

Monte d'Accoddi should be considered among the most important architectural manifestations of Mediterranean prehistory. It represents an important innovative contribution and at the same time demonstrates, through craft production, the continuation of a local tradition that evolved gradually while also interacting with the outside world.

The fieldwork at Monte d'Accoddi was spread over two large research projects: the first, directed by Ercole Contu, brought to light the external architectural characteristics of the monument and the surround-

ding settlement (Fig. 1.1); the second, subsequently run by Santo Tiné, brought to light the existence of the older monument and led to the proposal to reconstruct the second building, which took the form of a step pyramid (Fig. 1.2).

The site has been much written about and discussed, although this has mostly been in relation to architectural aspects and to possible genetic relationships beyond the shores of the island itself (*Tiné and Traverso 1992; Contu 1992; 2001*). The studies of craft production that have emerged over this decades-long project are yet to be completed. Recently the first comprehensive research of the phases of ceramic production from the San Ciriaco, Ozieri, and Sub-Ozieri phases, discovered during the excavations directed by Tiné (*Traverso 2005–2007*), was published.

This presentation contains several considerations on chronology, on craft production, and on elements of ritual and domestic activity, in order to demonstrate, through the data collected at Monte d'Accoddi, the process of transition from the Neolithic to the Eneolithic in Sardinia. Data from the pottery finds suggest inhabitation predating the construction of the monument; this was sporadic in the Middle Neolithic, becoming heavier in the Upper Neolithic. The shrine was constantly in use throughout the entire Copper Age and contains the more significant elements of tradition and innovation relevant to the Neolithic phase, found in aspects of architecture, culture, and craft production.

Some results from the study of finds recovered during the 1950's from the numerous excavations conducted by Ercole Contu will be presented (*Contu 2001*); these finds, together with the principal architectural features of the monument, demonstrate the sequence of frequentation of the site from the Neolithic to the Early Bronze Age. The finds provide much information on the level of habitation and the dynamics of the use of the shrine area, offering interesting information about aspects of ritual.

New considerations on the chronology of the monument

Before the excavations by Tiné produced radiocarbon dating, Contu (*1992*) had attributed the building of the monument of Monte d'Accoddi to the Ozieri facie. Following the discovery of the two building phases, he reasserted the attribution of the earlier monument to the Ozieri, while dating the second to the Eneolithic Filigosa phase (*Contu 2001*).

While the dating of the earlier monument was contemporary with other contexts of the Ozieri facies (Fig. 2), Tiné and Traverso (*1992*) attributed the construction of the first shrine to the period immediately following the Ozieri (Sub-Ozieri). This attribution was underlined during the presentation of research on the finds (*Traverso 2005–2007*): the au-

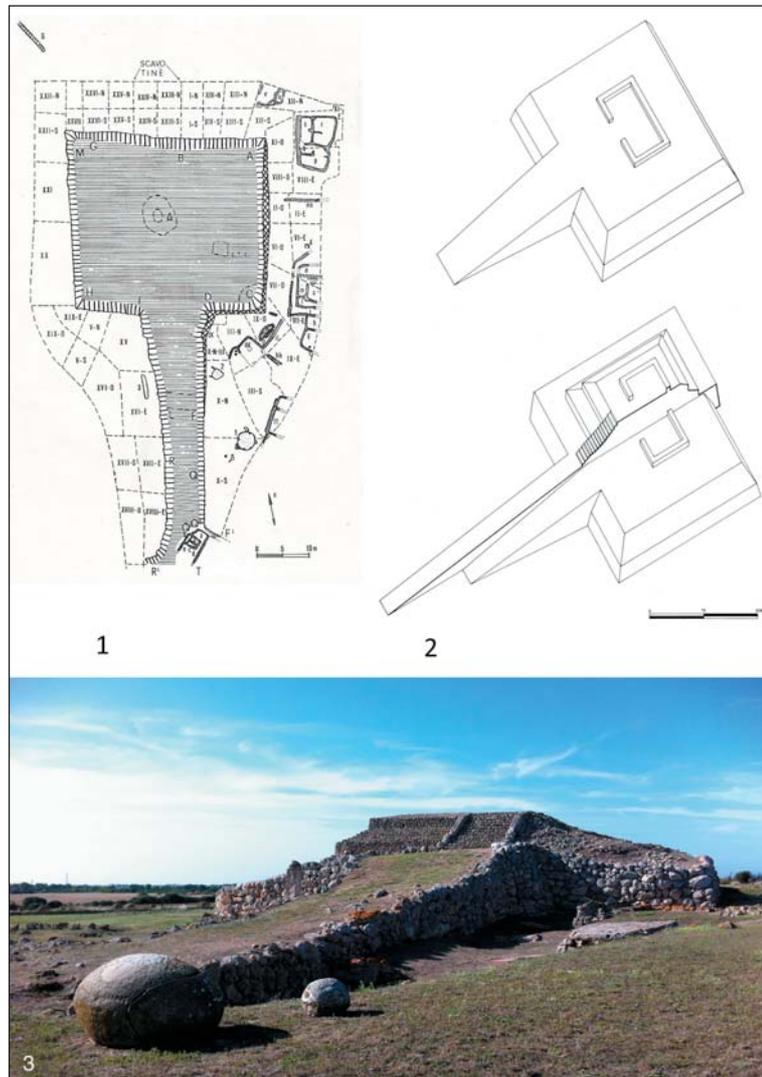


Fig. 1. Sassari, Monte d'Accoddi. 1 General plan of Contu excavations (Contu 1992). 2 Reconstruction of the two buildings' phases (Tiné and Traverso 1992). 3 The monument from the South-East.

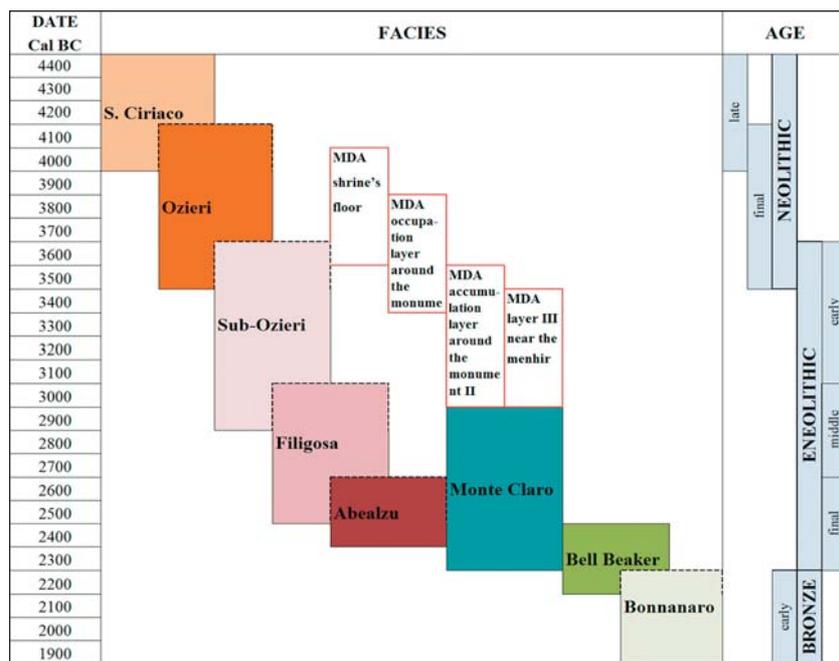


Fig. 2. Chronological and cultural frame of Sardinian Prehistory.

thor demonstrated how the deposits associated with the earlier monument, layers VI–IX of trial trench ‘Delta’ in particular, contained Ozieri finds, which is considered a *terminus post quem*. If this were the case, the dating of Monte d’Accoddi would force us to reconsider the chronology of the Ozieri in its later phases: indeed it would mean a precocious beginning to the sub-Ozieri phase in northern Sardinia. This early beginning is primarily recognised in habitation contexts in southern Sardinia, such as Su Coddu-Selargius and Terramaini-Pirri; among the finds relating to burial contexts, the tomb at Cannas di Sotto-Carbonia in south west Sardinia can be cited. Both Su Coddu and Cannas di Sotto were datable to the last four centuries of the IV millennium and the early III millennium calBC (Melis 2009; Melis et al. 2007; Lai 2009); it should be supposed that this facies had a long lifespan, or developed late in the south of Sardinia. Tinè and Traverso also assign the second monument to the Sub-Ozieri.

At Selargius, a new important chronological element helps to define the transition from the Ozieri to the Sub-Ozieri: structure 134 in sector Canelles of the settlement at Su Coddu gave a dating (3640–3370 calBC) more ancient than the others relating to the sub-Ozieri, associated as it was with older pottery finds. These finds had mixed morphological and technological characteristics: ceramics with forms typical of the sub-Ozieri; technical ability extraneous to this facies and more akin to that of the Ozieri was noticeable in the surface finishing and decoration.

The coexistence of differing techniques referable both to the Ozieri and the Sub-Ozieri underlines the gradual passage from one phase to the other. This context is therefore probably related to a moment of transition between the Ozieri and the Sub-Ozieri, which encompasses the period between 3600 and 3400 calBC. The period extends over the late Ozieri and the initial Sub-Ozieri. In the light of all of the dating of Su Coddu, which is coherent with both the preceding Ozieri and the later phases of Filigosa and Monte Claro (Fig. 2) one could consider the Ozieri of layers VI–IX of trench ‘Delta’ not as a *terminus post quem*,

but rather a *terminus ad quem* which dates the earliest monument: this dating perfectly fits the chronological lifespan of the Ozieri. In this way, one returns to the first hypothesis of cultural attribution, as proposed by Contu.

Similarly, the second monument could be attributed to the Sub-Ozieri, as implied by the radiocarbon dating and the presence of Sub-Ozieri finds in layers I–V of Tinè’s trench ‘Delta’. The second monument represents the evolution of the first, of which it retains the macroscopic characteristics (a truncated pyramid with access ramp), built on a different scale and with different construction techniques.

The phases of the shrine as illustrated by the data from the Contu excavations (1952–1959)

The lifespan of the site is traceable through the ceramic finds and radiocarbon dating: from a presumably sporadic frequentation during the Middle Neolithic and a more consistent presence in the Upper and Final Neolithic, there follows a use of the shrine through all the phases of the Eneolithic and Early Bronze Age. Occasionally, the shrine was frequented in the Nuragic and Roman periods. Presented in Figures 3–7 are a selection of finds, mostly pottery, that illustrate the various phases of the life of the shrine.

Late Neolithic

After an initial moment of confusion, originating in the still somewhat unclear cultural reference points

of San Ciriaco, today it is possible to retrace a reasonable quantity of ceramic finds to this period. These were found in various areas around the monument, mostly in the lower deposits (7 and 8), but also in the middle layers (4 and 5) of Contu's excavations. Many finds were recovered roughly 200m to the east of the monument in the 'ETFAS' trial trench. The stratigraphic position of the site at San Ciriaco is made clear by trial trench 'Delta' from the excavation by Tinè, since it was typical of the layers under the first monument, in particular layers XII and XI. Layer X contained San Ciriaco and Ozieri finds (*Traverso 2005–2007*).

Finds from the Contu excavations present several qualities typical of this facies. Among them in particular were sinuous and crenated bowls and cups, with the characteristic distinct and flared lip, pedestal based vessels, spoons, forms with decorations employing triangles and impressed points; on a technological level, the clay generally was good quality and fired at an adequate temperature, with polished surfaces (Fig. 3.1–6). However, spool handles, generally part of the formal San Ciriaco package, were not present.

As most of the finds data for San Ciriaco results from field walking, the fill of pit 377 of Cuccuru S'Arriu (*Santoni et al. 1997*) is considered the one reliable reference point, as it represents the only certain sealed context. Once again we find triangular fields with pointing as decoration, a motif also found in Corsica at Basi (*Tramoni 1998*). The time span proposed in 2007 (*Melis et al. 2007*) is indicated by the Contracuda-Perfugas radiocarbon dating taken from a layer containing San Ciriaco elements (4336–4246 calBC; 4336–4073 calBC). Beyond comparisons highlighted by various authors with the Diana and the Lagozza facies, the association with Corsica is also of great interest, sharing as it does with Sardinia the phenomenon of early megaliths in the western Mediterranean, characterised by coffres burials surrounded by stone circles. Within the scope of what has been defined as a cultural *koinè* – where the two islands, during the second half of the V millennium BC on the obsidian commerce route, sharing the same funerary monuments – one notes the presence of elements in the San Ciriaco style in various Corsican contexts, the radiocarbon datings of which confirm that proposed here (*Melis 2007; Tramoni et al. 2007*).

Considering the formal aspects of ceramic production and the presence of San Ciriaco elements with

in the chamber tombs (*domus de janus*) typical of the Ozieri (*Melis 2009*), San Ciriaco could be considered a formative phase of the Ozieri.

Final Neolithic

At Monte d'Accoddi, the Ozieri ceramic finds seem to be particularly abundant, partly because they are easily recognised among small fragments, thanks to their distinctive decoration. Consequently, the statistical data may be conditioned by the easier recognition of Ozieri fragments compared to the undecorated fragments belonging to the other facies.

In chronological terms, taking into consideration the new placement of the beginning and final moments in the temporal span traditionally attributed to the Ozieri, I have recently proposed a development of the facies between the end of the V and the first half of the IV millennium BC (*Melis et al. 2007*). This chronological placement is confirmed at its upper limit by the dating of the San Ciriaco di Contracuda layers, which represent the *terminus post quem*. For the lower limit, reliance has been given to the dating from San Benedetto di Iglesias (*Lai 2009*), which represents the only pure context of the facies.

The aesthetic quality of the 'red temple', completely covered with red wall plaster, is in keeping with its importance and with the quality shared in craft production, as well as being reflected in the symbolic-decorative use of painted plaster in the *domus de janus* tombs. The combination of the application of ochre with the other decorative techniques on pottery also created an attractive chromatic effect. The ceramic package of Monte d'Accoddi contained all of the classic forms of the Ozieri culture. In the same way, the field of decoration contained the motifs and ornamental principals typical of the facies (Figs. 3.7–10; 4).

Early Eneolithic

The Sub-Ozieri of Monte d'Accoddi has many analogies with similar southern manifestations, in particular those of Su Coddu, currently undergoing study by this research group (*Melis et al. 2007*). In passing from Ozieri to Sub-Ozieri, craft production shows signs of innovation, even within a strongly traditional sphere; in particular, opportunistic characteristics emerge that lead to a technological *savoir faire* in the case of some artefacts, such as painted sub-figulina pottery; this is to be found at Monte d'Accoddi, with homogenous chromatic and morphological characteristics that can be compared to southern examples (*Melis 2006*).

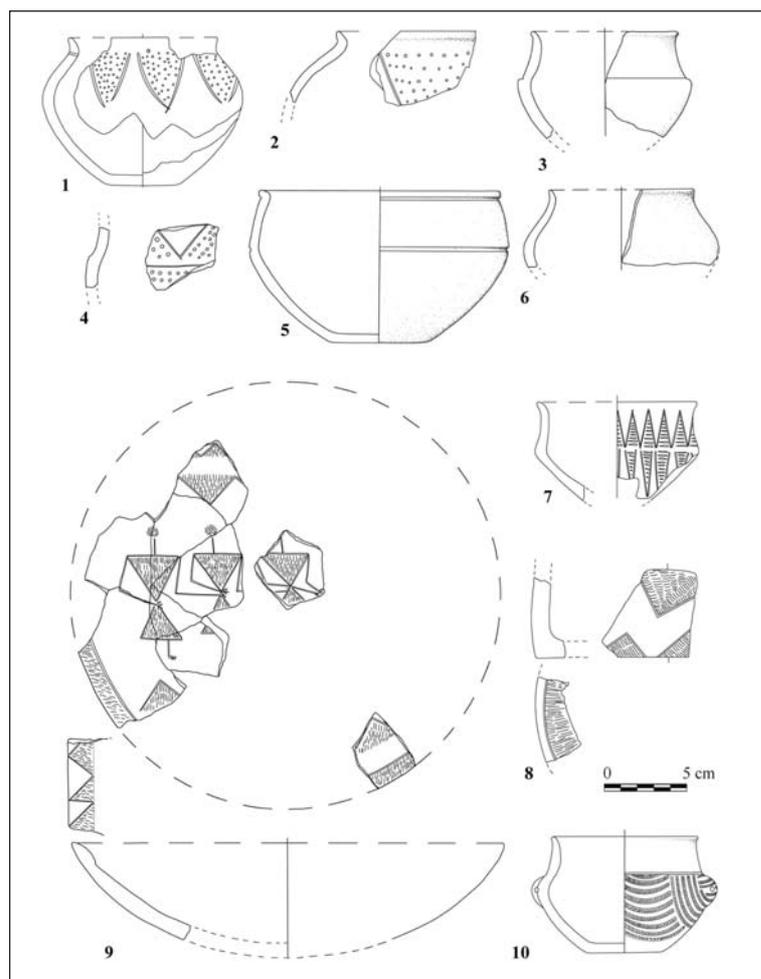


Fig. 3. Sassari, Monte d'Accoddi. 1-6 San Ciriaco. 7-10 Ozieri pottery.

Among the most interesting finds of this phase are 35 pottery fragments (Fig. 5.1-3,5) and the painted rim of a stone vase, most of which were discovered in trench X-S during the excavation by Prof. Contu, and less frequently in further trenches to the east of the monument (*Melis 2006*). The analysis of the excavation data and of the table drawn up by Contu (*Contu 1992*) show how the finds were not recovered from the lowest layers, but rather from levels 5 and 6, and more rarely from levels 4, 7, 8 and 3. It should be underlined that the number of painted finds was a tiny fraction of the enormous amount of material brought to light during the numerous stratigraphic excavations undertaken during the 1950's.

The fragments comprise of rims, sides, handles and bases. The vases were generally deep closed forms, with short or long cylindrical necks. Handles were typically subcutaneous tunnel handles with corresponding internal pouch. All the formal aspects described here fit the characteristics of the southern

Sub-Ozieri, as exemplified by the rich contexts found at Terramaini and Su Coddu, and more rarely at Cuccuru Biancu. The use of red painted pottery, as illustrated by a rim fragment found in trench X-N, layer 5, at Monte d'Accoddi, can be compared to the tripod vessel from Su Cungiau de Is Fundamentas-Simaxis (OR), which has a similar chromatic quality to those of Terramaini and Su Coddu.

A peculiarity of the village in the territory of Sassari was the use of closely spaced parallel bands, sometimes discontinuous, and with rounded endings (Fig. 5.2). The use of horizontal band motifs is common on rims and the necks of vases (Fig. 5.3, 5), and is also sometimes present internally, in much the same way as the use of coloured bands or areas around the handle. Most interesting is the similarity between the serpentine and tremolo motifs of Monte d'Accoddi and those of Cagliariaritano. This may be interpreted as a kind of pictoric rendition of the zigzag; this motif constitutes one of the ornamental themes that recur from the Sub-Ozieri to the Filigosa.

In the case of the former, the technique used was incision, while in the latter, it was graffito. On the other hand, the zoomorphic figures to be found among the Cagliariaritano pottery were not present at Monte d'Accoddi. Among the undecorated pottery, pronounced carenated forms were common, including examples with vertical perforations (Fig. 5.4).

It is important to note that the building method of the second monument, of the Sub-Ozieri phase, sacrifices some aesthetic aspects in favour of greater monumentality. The poor attention to the field of decoration is echoed in the pottery, which gradually loses the richness and ornamental complexity that distinguished the Ozieri.

Middle and Late Eneolithic

The presence at Monte d'Accoddi of both the Sub-Ozieri and the Filigosa facies, in stratigraphical sequence, removes any doubt that they may have been one and the same thing, an idea still apparently held dear by some scholars. The pottery at Monte d'Ac-

coddi presents the typical formal and decorative characteristics of the Filigosa (Fig. 5.6–10). Pottery shapes are predominately rigidly profiled carenated forms with a distinctive rim, but there are also several unusual forms, such as a square-mouthed vase (Fig. 5.7), which has its pendant in the Filigosa levels of the tomb containing tetrapod pottery of S. Pedru-Alghero (Contu 1964). The pottery decoration follows the repetitive standard of an incised zigzag motif, along with a few innovations, such as a grid pattern (Fig. 5.6).

During the Abealzu phase, the village developed to the east of the monument. The presence of a hut placed at the base of the ramp suggests that access to the upper part of the building was controlled and limited in this period. Curiously, Abealzu, recognised through a small number of finds which it often presents during phases of transition from the Filigosa phase, is represented at Monte d'Accoddi by particularly rich contexts, foremost being that of Hut 'p-s', dubbed by Contu 'dello stregone' or 'of the sorcerer' (Fig. 6). This hut was abandoned after being destroyed by fire. The morphological study of the ceramics (Melis 2000) shows an articulated pottery package, which, as in the preceding phases, contains both traditional and innovative elements. An example of this is the truncated-conical bowl, concave in section, called 'vaso a cestello' ('basket' or 'punnet' bowl), typical ware of the Ozieri, which represents a trait d'union between the Ozieri, Sub-Ozieri, Filigosa and Abealzu facies, underlining the genetic link that unites them. Among the innovative elements, the introduction of amphorae stands out, well represented in the 'capanna dello stregone'.

Decoration is extremely rare: the impressed technique, found in all phases of the Eneolithic, is evident on a loom weight (Fig. 6.26). Of particular interest is the appearance of burnishing (Fig. 6.2), realised with vertical lines beneath the rim. This technique is also sporadically represented in Filigosa: at S. Giovanni Suergiu (Atzeni 1995) it was used on a long-necked pot to create a motif similar to that at Monte d'Accoddi.

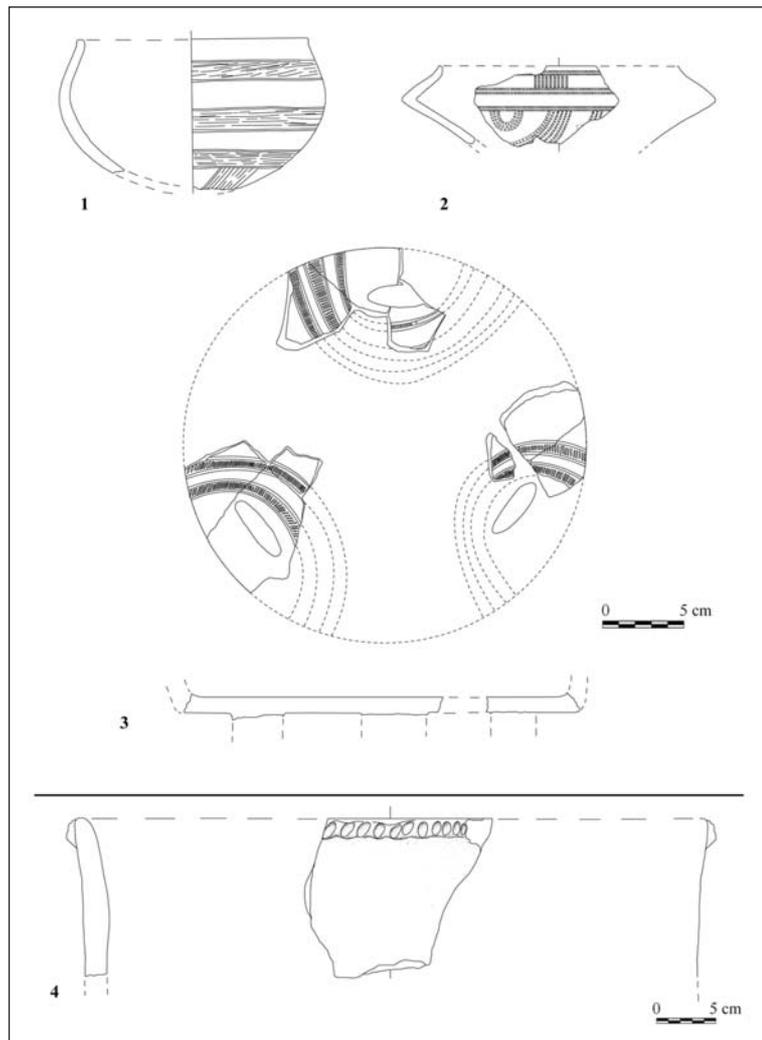


Fig. 4. Sassari, Monte d'Accoddi: pottery of the Ozieri facies.

Burnishing is a decorative technique peculiar to the facies of Monte Claro, and in particular to its southern manifestations, but it is absent from the Monte Claro finds recovered at Monte d'Accoddi. This is evidence of the sporadic nature of frequentation of the shrine during the full Eneolithic (Fig. 7.1–3). Among the extremely fragmentary pottery finds, large vessels, tripods, and bowls are present; many bear the characteristic decoration of vertical and horizontal grooves. These grooves are often wide and closely spaced, in the 'Sassari' style. Two small stone axes are also perhaps associated with the same facies (Fig. 7.1–2), decorated with branch motifs; such motifs are not typical of the 'Sassari' style; however, they are well represented in the Monte Claro pottery of the central-eastern area, such as at Biriai-Oliena (Castaldi 1999), in south-western and southern Sardinia.

The chronology of Monte Claro (Fig. 2) as proposed by the author in 2007, in the absence of radiomet-

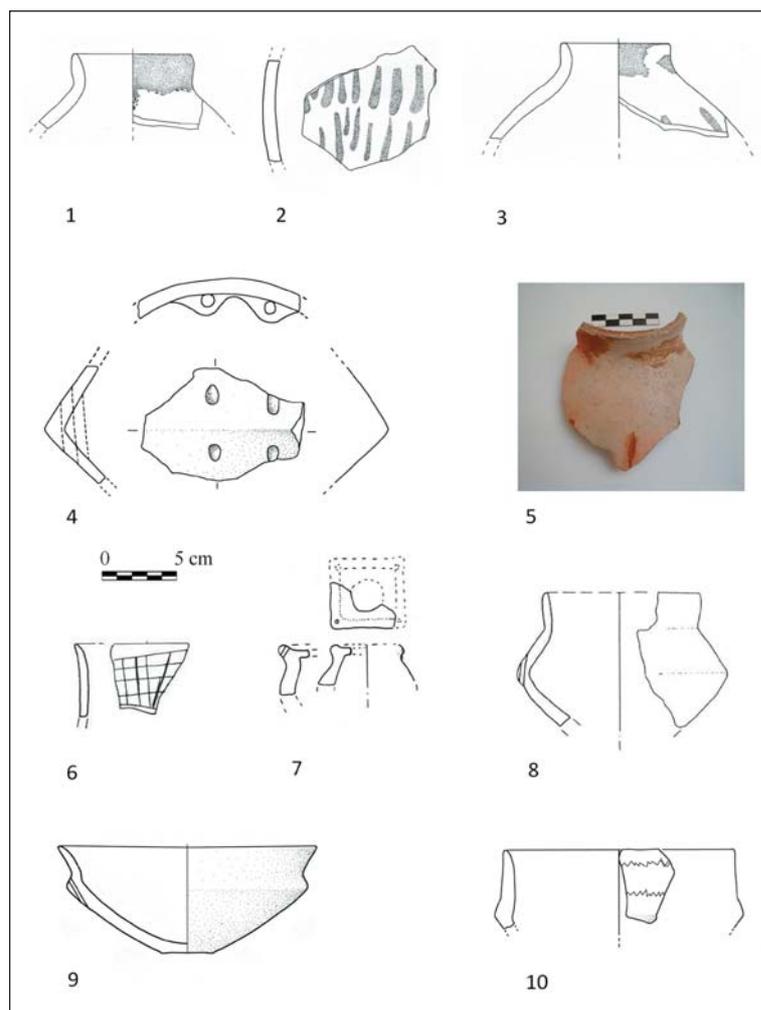


Fig. 5. Sassari, Monte d'Accoddi. 1-5 pottery of the Sub-Ozieri. 6-10 Filigosa facies.

ric dating, but based on elements of cultural analysis together with other aspects (Melis et al. 2007), has been recently confirmed by a series of radiocarbon datings (Lai 2009).

Final Eneolithic and Early Bronze Age

The presence of Bell Beaker culture at Monte d'Accoddi must be considered at best sporadic, considering the meagre quantity of finds recovered. Finds include hemispheric bowls (Fig. 7.4), cups, tripods or tetrapods, and crenated bowls. Of the pedestal base pottery, the cylindrical form of a base can be recognised. The vessels are decorated in the pure Maritime style, as well as with more complex arrangements of triangles or zigzags. The most common decoration is comb impressing. Another example is perhaps the use of a shell as a stamp; the use of incision is less frequent. The finds come for the most part from the upper layers, later than those relative to Abealzu. The best preserved find is a hemispheric bowl (Fig. 7.4), decorated with comb impressions

over almost the whole of its surface: an ornamental composition that includes zigzag and triangular motifs as well as single horizontal bands. The pattern brings to mind similar motifs such as those found at Su Crucifissu Mannu-Portotorres, Anghelu Ruju-Alghero (Ferrarese Cerutti 1981), but also in southern contexts such as S. Bartolomeo-Cagliari (Atzeni 1966) and Bingia 'e Monti-Gonnostramatza (Atzeni 1998).

Recently, research has shown that Beaker culture is represented in Sardinia at 72, predominantly funerary, sites (Melis 2010b), while much more rarely in living areas; the scarcity of available elements prevents us from being able to understand whether the monument at Monte d'Accoddi was still recognised as a site of religious significance during the Beaker period.

When the monument had probably already been abandoned at around the Early Bronze Age, during the period of the Bonnanaro facies, the burial of a young male replete with grave goods took place: the skull of the young man was placed inside a tripod with handles alongside a spher-

ical bowl (Fig. 7.5-6). The tripod is unusual, with its hemispheric basin, due to the low position of the handle: generally with this form, the handle is placed halfway up or directly under the rim. In Sardinia, this ritual has its origins in the Beaker period: for example, in Tomb 3 at Ispiluncas, Sedilo, a skull fragment was placed inside a cup (Melis 1998).

Few elements attest to the use of the shrine in subsequent phases: fragments of cooking pots can be compared to those of the Middle Bronze Age; pyramidal loom weights with two right-angled perforations are ascribable to the Final Bronze Age-Early Iron Age.

Domestic activity and ritual

In the case of a site such as Monte d'Accoddi, a village containing a sacred monument, it is often difficult to clearly distinguish domestic from ritual activity.

The large quantity of grindstones point to agricultural activity and the processing of cereals. Numerous mortars and small basins (Contu 2001) are evidence of the processing of ochre, traces of which can often still be discerned. This substance was kept in clay containers and used to colour shells, the walls of the monument (the 'red temple'), and to decorate pottery. The widespread use of ochre in religious and funerary contexts in Sardinia is testimony to its importance in prehistoric ritual and its symbolic value (Tanda 2003). At the same time, numerous articles in the archaeological and ethnographic literature describe its use in the domestic sphere – for example, as an additive to help fasten tools to their handles (Lombard, Wadley 2009), in tanning (Wadley 2005) or in medicine (Velo 1984).

Alongside objects from the domestic world are elements of a more clearly ritual significance. Among these are symbols of the megalithic mindset, present at Monte d'Accoddi in the phases preceding the construction of the monument: menhir, stone slabs and figure decorated stele (Contu 1992), the latter bearing apparently exotic iconographies in comparison to the local examples.

In the sphere of artefacts of clearly symbolic significance, a little attention should be given to the marble pierced plate statuettes, which underlines a defining attribute. Eight fragments were recovered, of which 3 related to the head and part of the neck, 1 to the torso, 2 to the midriff with part of an arm and 2 to the lower extremities (Lilliu 1999, sheets 104–110). Their extremely fragmentary state does not seem to be accidental. If, as in one case, drilled holes might represent an attempt at restoration, in others there are evident fractures in the neck, trunk and arms; furthermore, splintering around the head seems to testify to violent intentional destruction. Contu, in his site journal, hypothesises that it was subsequently used as a pestle.

Pre-nuragic statues are often found in a mutilated state, lacking all or part of the head. Their significance in the sphere of cult practises makes it necessary to pose the question as to whether the fracture was intentional. Ritual fragmentation and the subtraction of the original function of objects in funerary and cult practises are little explored themes in the literature of Sardinian prehistory (Castaldi 1965; Foschi Nieddu, Paschina 2004), above all in relation to the analysis of the fractures and method of destruction. Moreover, distinctions are not made between finds regarding funerary rites and those of

cult practises. Lilliu considered the breaking of the statuettes at Monte d'Accoddi to be intentional, which, like that in funerary rites, represented “*la divinità materna, di carattere terrestre e frugifero ed anche chthonio*” (“*the chthonic mother divinity, earthy and fruitful*”) (Lilliu 1957). In the opinion of the author, their destruction and dispersion were linked to fertility rites.

Burials in Sardinia often contain various types of intentionally broken objects: picks, axes, hammer heads, arrowheads, blades, pottery, and statues (Cappai and Melis 2005–2008). The latter are frequently broken at the neck, midriff, or arms, which tend to be the more fragile parts; therefore, in many cases the breakage could be purely accidental. In cases of intentional damage, one should ponder whether the breakage is part of a ritual in which the object maintains or changes its symbolic significance, or whether it loses its sacred value.

These considerations have led to a reconsideration of the statues of Monte d'Accoddi and to the implementation of technological and functional analysis, which is ongoing. The analysis will provide elements to help answer the following questions: were the breakages and fractures really intentional, and what, if any, were the eventual subsequent secondary uses, as hypothesised by Contu?

Spinning and textiles

Spinning and textile production had an extremely important role at Monte d'Accoddi, the first being widely documented by the presence of numerous clay spindle whorls, found for the most part in the area to the east of the site, the latter from a wide variety of loom weights, which would suggest a correlation between these activities and rituals associated with the shrine. Whorls are a common find in Pre-nuragic Sardinia, while loom weights have been found at 28 different sites, 67% of which were settlements. Only two sites were of a religious character, but loom weights comprised some 56% of all finds retrieved from those sites. Of these, 45% come from Monte d'Accoddi. They are associated with each of the Ozieri, Sub-Ozieri, Abealzu and Monte Claro phases. The possibility that some of the weight fragments that cannot easily be given a cultural identity could be attributed to Filigosa should not be excluded.

Such a concentration of these artefacts in a place of cult activity would suggest that textiles played a part in some way in the rituals associated with the

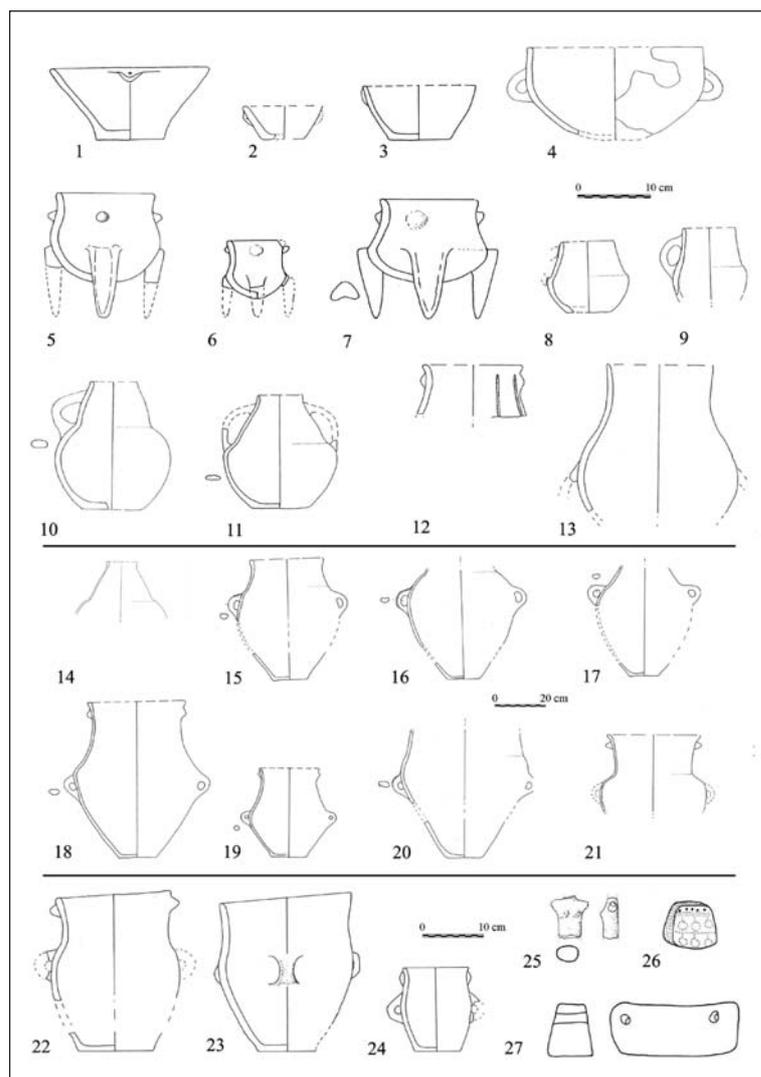


Fig. 6. Sassari, Monte d'Accoddi: pottery of the Abealzu facies from the 'sorcerers hut'.

shrine. Different typologies of loom weights are present: single hole (cones, pyramids, and truncated-pyramids), double hole (kidney-shaped, parallelepipeds; Fig. 6.27), and smaller weights with a row of holes, particular to Sardinia, often decorated with symbolic motifs (Fig. 6.26). These last, in contrast to the others, often exhibit a higher level of technical ability in the finishing and were often much smaller and sometimes impractical.

Hypothesising that this activity would be predominantly a feminine prerogative, as suggested by written and iconographic sources (Melis 1992–1993), we can suppose that females were among the adepts of the cult. If, as literary sources claim, weaving was a metaphor for conjugation (Guaitoli 2003), in pre-historic society the weaving of the threads of the warp with those of the weft could be interpreted as symbolic of sexual union, that of the male (the weft)

with that of the female (the warp). In this sense, the very act of weaving becomes a ritual activity. On another level, the presence of the weights could be related to the offering of textiles (Mingazzini 1956) or the creation of ceremonial dress.

The use of metal

It seems possible that there was metallurgical activity in *loco* beginning from at least the Filigosa phase, based on the stratigraphical data; perhaps this too was related in some way to ritual activity; the evidence consists of finds of various material, crucibles, hammers, grinders, what appears to be a lump of slag and *gallets à cupules*. The presence of crucibles is of the utmost importance, considering the extreme rarity of such finds in Sardinia. The excavations of Prof. Contu uncovered 33 metal artefacts and fragments; they were present in the most ancient layers beneath the ramp, correlated with finds from the Ozieri phase. Given that it was possible to see at first hand only a few of the finds conserved at the Museum of Sassari, most of the details are taken from the site records. The objects were predominantly made of copper: point-making tools (45%), several small axes (12%), laminae (6%), an awl, a fishhook, a dagger, and a pendant. Added to these were a small silver disc and several fragments of lead.

Earth as a building material

Evidence on the use of earth and clay in building in Sardinia is infrequent, and there are few serious studies on the subject. The first systematic research concerned mud bricks and the fragments of wall plaster found in the settlement of Su Coddu-Canelles (Melis 2010a). Archaeometric analysis of the plaster fragments (Mameli, Melis 2008) showed similar characteristics to those sampled at Monte d'Accoddi (Tinè, Traverso 1992).

At the site of the shrine of Monte d'Accoddi, the plaster finds were accompanied by fragments of wattle and daub; much information is provided by the buildings of the Abealzu phase, in which the village

spread to the east of the pyramid-like monument. Of special note are the 'dello stregone' hut and hut '1-o'.

Once again, as at Su Coddu, the use of branches of differing dimensions is apparent, although they are not from marshland plants. Ercole Contu, who directed the site in the 1950's, suggested that the wood came from *Pistacia lentiscus*, a shrub that grows locally. The fragments were mostly found in the eastern sector, with notable concentrations around the southeast corner of the monument. Surprisingly only a single fragment was recovered from the 'dello stregone' hut, which, destroyed as it was by fire, left a context in excellent condition which should have contained any earthen architectural elements that had been present. In that hut, and others, fireplaces were found, partly surrounded by clay (Fig. 7.7-8), and partly by vertically placed grinding tools.

Discussion

The revision of the chronology of Monte d'Accoddi introduces a number of considerations on the Ozieri facies, on the end of the Neolithic period and the significance of the monument as an element of tradition and innovation. Contu and Lilliu dated the Ozieri culture to the Late Neolithic on the basis of the radiometric dating and extra-insular parallels (Contu 1988; Lilliu 1988). This template has since been followed by most scholars.

The 'Sub-Ozieri', a term coined by Ugas in the presentation of the first results of the Su Coddu excavation, was recognised and well documented during the 1980's as a derivation of the Ozieri facies in the settlements of Su Coddu-Selargius and Terramini-Pirri (Ugas et al. 1985; 1989; Usai 1987). Some have considered it to be a contemporary of the Filigosa facies, or as its representation as habitation; however, recently it has been possible, thanks to new data from excavations, radiometric dating, and through typological analysis of the pottery, to place it between the classic Ozieri and the Filigosa, in a gradually evolving sequence (Melis 2009).

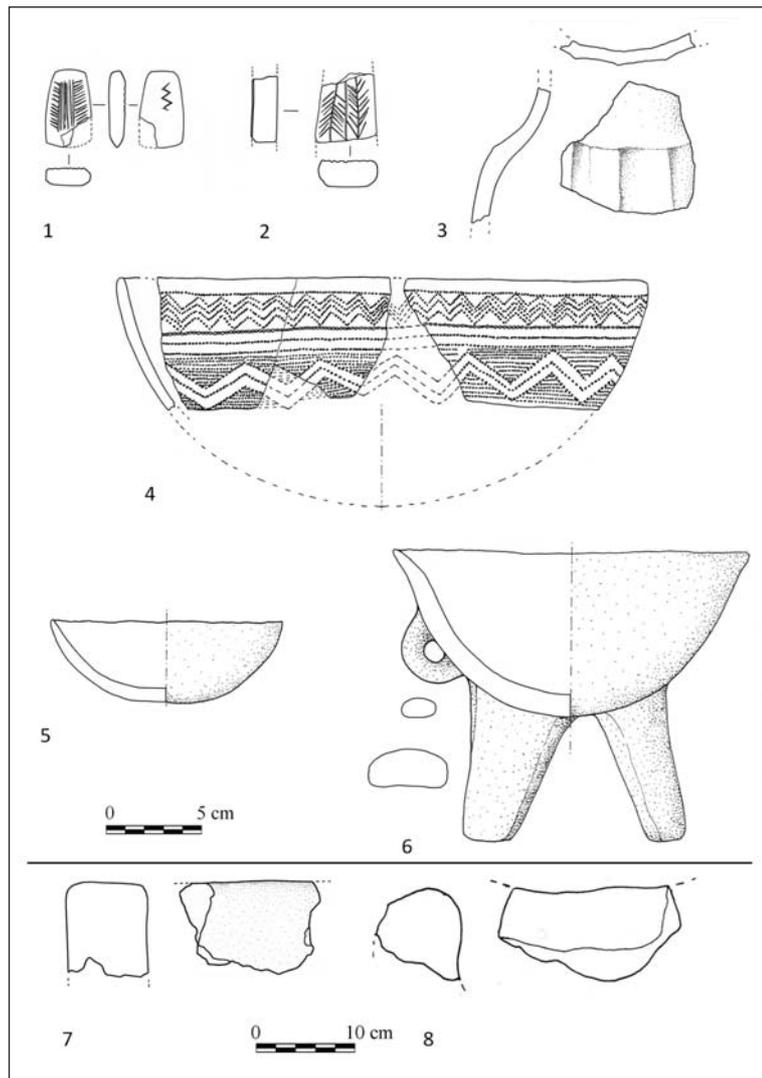


Fig. 7. Sassari, Monte d'Accoddi. 1-2 lithic axes. 3 pottery of the Monte Claro facies. 5-6 Bell Beaker pottery. 7-8 fragments of clay fireplace.

Analysing the Sardinian contexts, it becomes clear how the features associated with the Eneolithic (technological innovations such as the introduction of metal, transformations in craft production, relationship with the landscape, ritual, and changes in socio-economic relationships) appear gradually.

If one considers the period between 3700 and 3300 (calBC), in which those processes of transformation that distinguish the Eneolithic take place on a European scale (Barfield 2002), there is a partial correspondence in Sardinia to the development of the Ozieri (Fig. 2).

Knowledge of metal and processes of metalworking are often considered to be among the defining characteristics of the Eneolithic. However, it has been noted by many authors as the earliest metallurgical

phase in the cultural sphere of Neolithic tradition, with different timing and different procedures; this makes it difficult to find a dividing line that clearly separates the Neolithic period from the Eneolithic. The oldest metal artefacts in Sardinia are referable to the Ozieri: these consist of small copper and silver objects associated with metalworking processes still in the embryonic stages, found in equal measure in settlements, cult areas and tombs. With the Sub-Ozieri, the presence of metal artefacts grows considerably, and these come in the most part from habitation contexts. This information, while taking into consideration the limited attestation of the Sub-Ozieri in funerary contexts, could be significant and interpreted as a lack of awareness as to the value of this new raw material, still in its earliest stages of experimentation. Only in the subsequent Filigosa facies does the presence of metal artefacts among grave goods underline its value as a status symbol. The marginal part played by metal during the sub-Ozieri seems to be confirmed by the first results of the technological analysis of craft production Lot Badas at Su Coddu-Canelles, which has not revealed the use of metal in the *chaines opératoires* of hard animal and lithic materials (Melis 2009). It is important, however, to highlight that the first direct evidence of metal fusion *in loco* is in the sub-Ozieri, as determined by the find of a crucible at Su Coddu (Manunza 2005).

The technological analysis of craft production in stone, ceramics, and solid animal materials shows how during the Sub-Ozieri there is a gradual change in the organisation of production, with a reduction in working times and the application of technological *savoir faire* to limited categories of artefact (Melis 2009). This gradual evolution is typical of all phases of the Ozieri tradition, as demonstrated by the typological analysis of the pottery (Melis 2000) and the stratigraphic data from Monte d'Accoddi (Conzu 1992).

The construction of the monument at Monte d'Accoddi during the Ozieri phase is an example of innovation: for the first time, a cult 'space' is located in a building of purely cult significance, and is distinct from a burial 'space'; its architectural characteristics make the monument unique; this is possibly evidence of social change, in as much as it is an expression of communal participation in both its construction and its use. But at the same time, it represents an element of continuity between the Neolithic and the Eneolithic, as well as between the diverse phases of the Eneolithic itself, for the identity of settlement

choices, for the gradual evolution of morpho-technological aspects of craft production and for the continuation of similar rituals, among them those related to spinning and weaving, as testified from the Ozieri to the Abealzu.

In the light of this, we could propose the definition of 'Final Neolithic' for the Ozieri, to be considered as a formative phase of the Eneolithic, in the course of which metals appear, and works that imply a communal effort are undertaken; this takes place in an economic undercurrent still typical of the Neolithic, which gradually evolves towards the Eneolithic phases. Agriculture appears to develop more strongly during the Sub-Ozieri, as suggested by the evidence from Selargius and the results on paleo-nutrition derived from the carbon and nitrogen stable isotope analysis (Lai 2009), although thus far these results have been taken from a limited sample.

In the light of this data, it is possible to glimpse the gradual passage from the Neolithic to the Eneolithic at Monte d'Accoddi, correlated with a series of socio-economic changes in a background of strong traditions: the building of the first monument represents an element of innovation; the construction of the second, based on the same principle of the 'luogo alto', or 'exalted place' realised through the pyramid-like monument with its ramp, represents the genetic link between Neolithic and Eneolithic, between Ozieri and Sub-Ozieri.

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