CAPO MANNU PROJECT 2011 - SURVEY REPORT

AUTHOR

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CATEGORY

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ABSTRACT

In this paper the author presents the results of the first systematic survey of the area (research area B), between the Capo Mannu promontory and the western shores of Sa 'e Proccus and the Is Benas lakes, circa 12.66 sq km / 1270 hectares.

From an archaeological point of view, this area is one of particular interest for it is the one in which the geographer Ptolemy located an important harbour known as *Korakodes portus*, which existed during the Roman phase, and was related to the ancient city of Cornus.

The amount of materials coming from the diving expeditions in the area seems to confirm the identification of the port with the Su Pallosu bay.

INTRODUCTION

In September 2011, the Capo Mannu Project (CMP) - an international, interdisciplinary scientific project - was launched in the coastal area of San Vero Milis (OR), in western Sardinia [1]. The main objective of the CMP is to create a local model of medium and long-term environmental and cultural development in Sardinia during the Holocene phase, and to compare it with other areas of the island.

The project comprises the following four research areas:

A. Coastal and sub-coastal transformation during the Holocene phase in northern Sinis
B. Investigation of the archaeological landscape of northern Sinis
C. Patterns of human-environment interaction in the medium and long term
D. Development of an integrated analysis model

In this paper I present the results of the first systematic survey of the area (research area B), between the Capo Mannu promontory and the western shores of Sa 'e Proccus and the Is Benas lakes – circa 12.66 sq km / 1270 hectares. The main goals of this systematic field survey were:

1. Identifying and cataloguing the archaeological sites of the area, both as buildings/architectural facts and as places of settlement or of funerary/ritual function for the community.

2. Analysing the distribution of archaeological finds in the territory by phase and typology, in order to locate an 'experiential' logic of life within the communities that produced the landscape as it was. This meant identifying the pattern of distribution of non-architectural evidence – i.e. not necessarily related to specific housing or funerary concentrations as defined by the word 'site' but to a more generalised use of the landscape.

From an archaeological point of view, this area is one of particular interest for it is the one in which the Egyptian scholar Ptolemy located an important harbour known as *Korakodes portus* which existed during the Roman phase, and was related to the ancient city of Cornus (Zucca 2006). The significant amount of materials coming from the diving expeditions in the area seems to confirm the location of the port at Su Pallosu bay (Spanu 2006), although the evidence in support of this claim on the mainland side remains scarce (Stiglitz 2006).

The presence and local availability of salt – an essential and marketable resource, the extraction of which from the ponds behind the sand dunes is documented since at least the 12th century A.D. – must have played a key role in the settlement of human communities in the area since prehistoric times (Stiglitz 2006). It is likely that a type of food production associated with salt took place, such as the local *salsamenta* (salted foods) known as *korakìdia* in Egypt, and obtained from a fish called kòrakos which may have given the port now known as Su Pallosu its ancient name *Korakodes* (Zucca 2006:12). A systematic survey of this landscape within the Capo Mannu Project will, once completed, give us valuable new data relevant to the interpretation of human settlement in this region.

In the following paragraphs I explain the methodology we adopted and the overall results of the 2011 campaign. Other contributions in this same volume (Castangia and Mulargia; Caruso, D'Errico and Maffezzoli) will discuss the results of the study of artefacts collected during the survey activities.

METHODOLOGY

The area was divided into 703 territorial units (TU) – portions of land representing closed 'units' in which the artefacts were collected – usually corresponding to single fields. These areas, to which ID numbers were assigned, were defined using the most recent aerial photography available on Google Earth (2011), on the basis of a supposed homogeneity in visual texture (Fig. 1). In various cases corrections of these definitions were necessary.

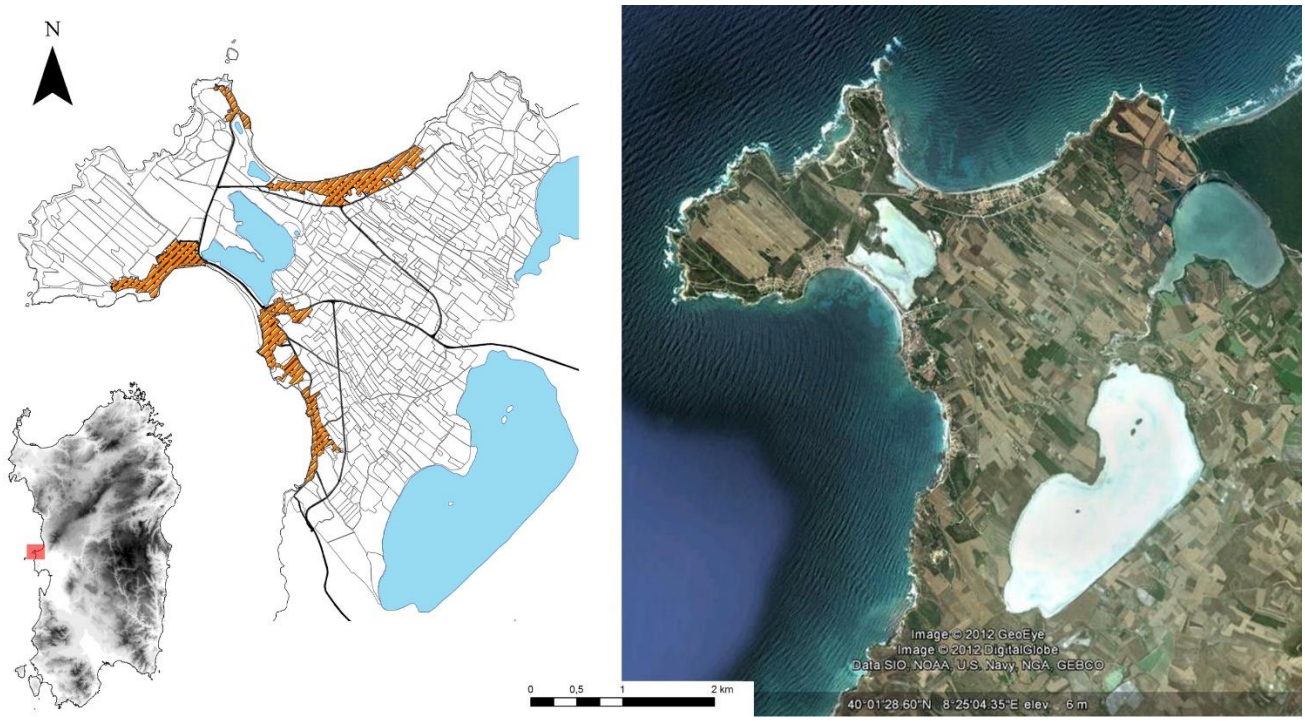

Fig. 1 - Territorial Units; in yellow and red the urban areas.

Each unit was inspected by a team of 10 people walking at a regular distance from each other; this distance varied from time to time depending on a number of specific and highly variable local conditions (general visibility, day-to-day visibility, the discovery of a new site nearby, etc.): a 'standard' distance was defined as 10m, but it was reduced to 5 or 2m in those cases in which the area contained a site or if it was required by any other circumstance.

We considered a 'site' as an extension of space in which the concentration of material culture elements was such that it implied intentional, repeated and voluntary human actions conducted in a certain place. All those elements of material culture that were not associated with any intention were excluded from this definition, which, in consideration of the highly variable nature of the evidence, was of course used with a degree of flexibility.

In the surveyed area there were precisely definable situations, especially those of monumental nature, such as nuraghi and *domus de janas* – and more complex evidence related to non-monumental phenomena (settlements with perishable material structures, burials in the pit, etc.).

The spatial coordinates of every point in which material of archaeological nature has been identified, either singularly or in small concentrations, were saved with the aid of a GPS device in order to later analyse the density of artefacts with spatial analysis software.

We used five levels of visibility:

1. Ploughed field

2. Worked field (non-ploughed)

3. Non-worked field

4. Mediterranean scrub

5. Built

They were adapted depending on the needs of every case, which proved extremely variable.

QUANTITATIVE DATA

The first survey campaign held in September 2011 investigated a total of circa 290 hectares - 2.9 quare kilometres (Fig. 2 and Table 1).

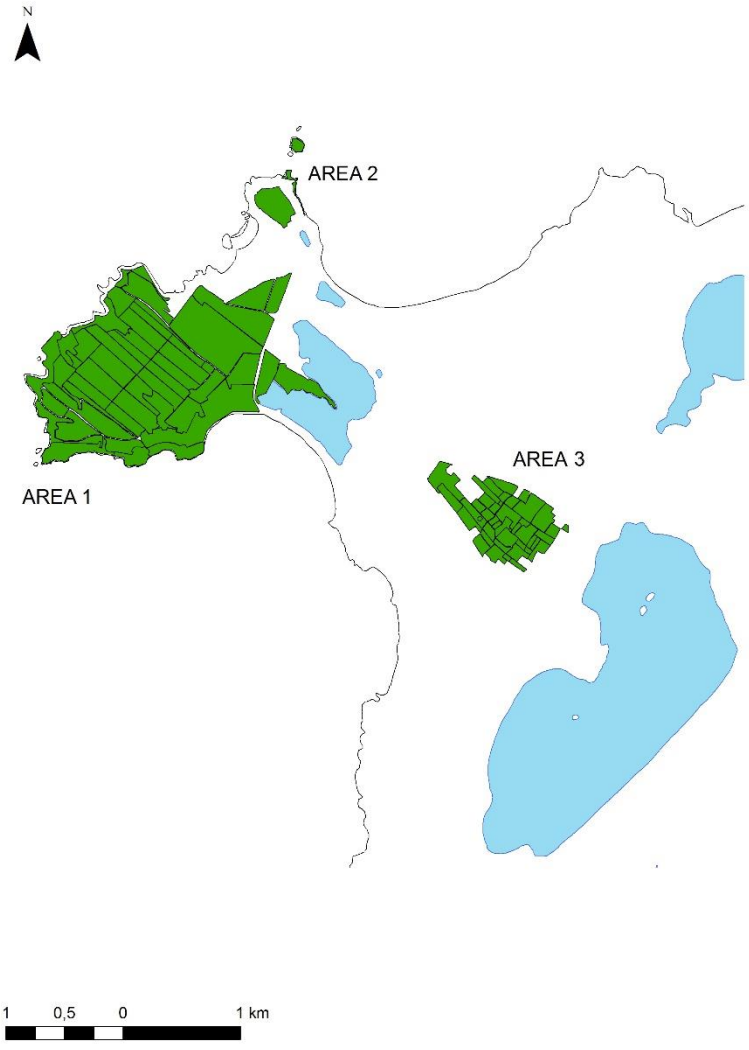

Fig. 2 - Investigated territorial units (green).

The efforts of the first campaign were focused on the area to the west of the Sa Salina Manna pond (Area 1), and then to the two areas of Su Pallosu (Area 2) and Monte Benei (Area 3). These choices were motivated by the need to observe the behaviour of areas with different archaeological features:

one in which non-systematic recognition was never able to locate any site except the Spanish period coastal towers (Area 1), another in which a site was partially excavated (Area 2), and one in which a settlement was identified in a vague and undefined way (Area 3). The investigation of these two areas yielded important results and allowed a procedural 'amendment' of the survey methodologies formerly planned and put into operation.

During the survey, the three areas were characterised by medium-low visibility levels - 3 and 4, correspondent to non-worked fields, fields waiting for ploughing, bushy areas and reforestations. Only in a few cases the visibility was classifiable as level 2 - worked field (Table 1).

A total of 122 archaeological material bags were collected, catalogued, given an ID number and contained different materials (Table 2). Each collection is associated with a date, a TU, a site and other items relating to the different materials. The spatial coordinates of 3351 collecting points were saved (1155/sq km). The total number of collected materials is: 7426 ceramic fragments (2560/sq km), 984 obsidian fragments (339/kmq), 257 fragments of flint (88/sq km), 377 lithic fragments (130/kmq), 643 fragments of malacofauna (221/sq km), 55 tile fragments (18/sq km), 5 glass sherds (1/kmq), 6 metal fragments (2/sq km and 7 animal bone fragments (2/sq km).

The higher densities of collection points are located in TU where a site of some sort was identified, however the opposite is also true at some sites (Fig. 3 and 4), in which collections consisted of statistical sampling only (esp. towers of Spanish phase). The general density of artefacts from Area 1, consisting of 50 TU, was extremely low, 0.000272 points per sq m - only 15% of the total points of collection (despite the identification of 4 new sites) are located in this area (Fig. 5). Area 2's density is equal to 0.006696 points per sq m per 4 TU (Fig. 6), and Area 3 the highest with 0.00797 per 42 TU (Fig. 7).

Eleven archaeological sites were identified during the 2011 campaign, some of them already known in literature following surveys carried out during the 80s and the 90s (Fig. 8 and 9, see Tore and Stiglitz 1987). They were all assigned a reference code, which is internal to the project. A list with descriptions of the single sites follows.

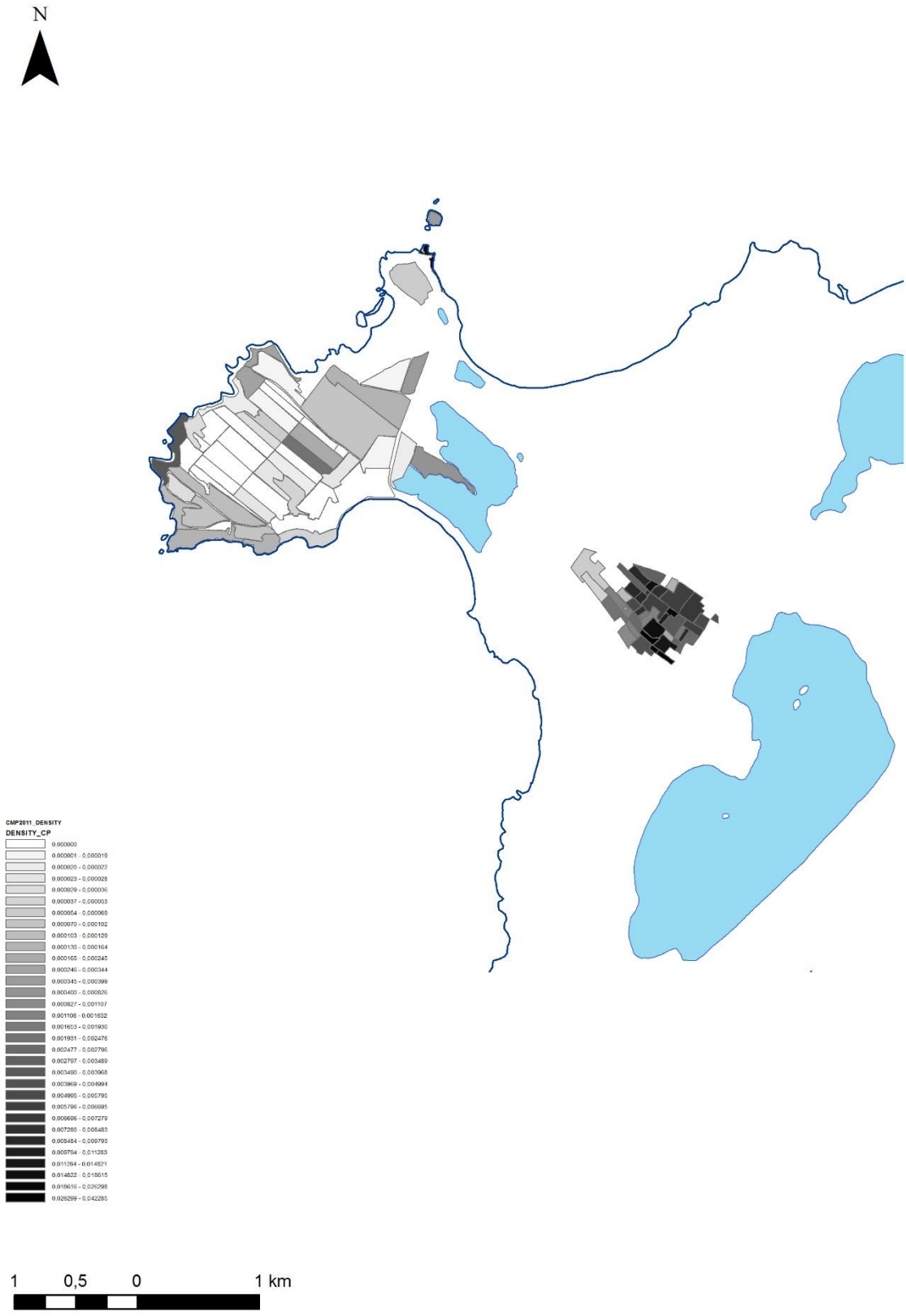

Fig. 3 - Density of collection points per square meter.

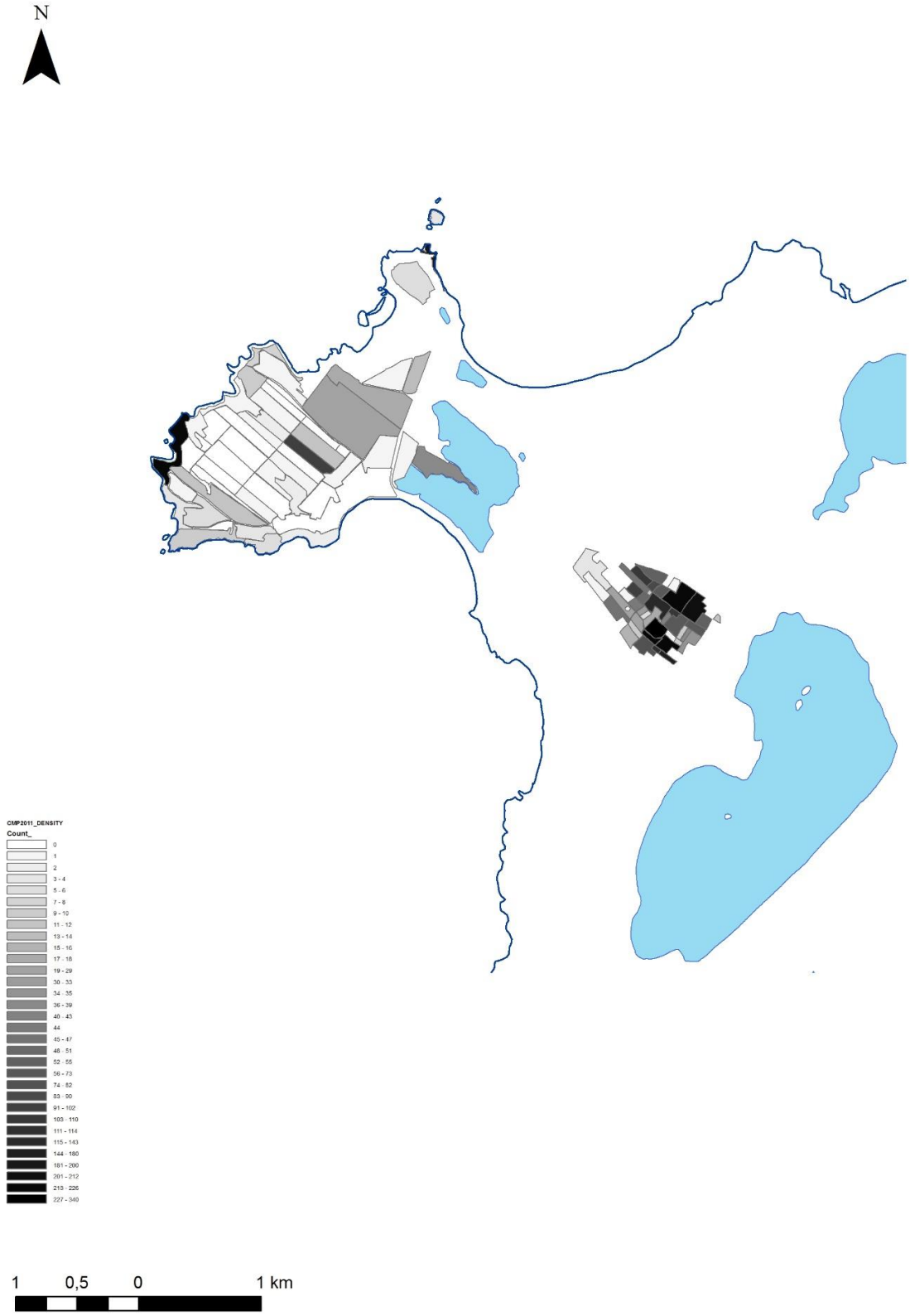

Fig. 4 - Collecting points / Territorial Units.

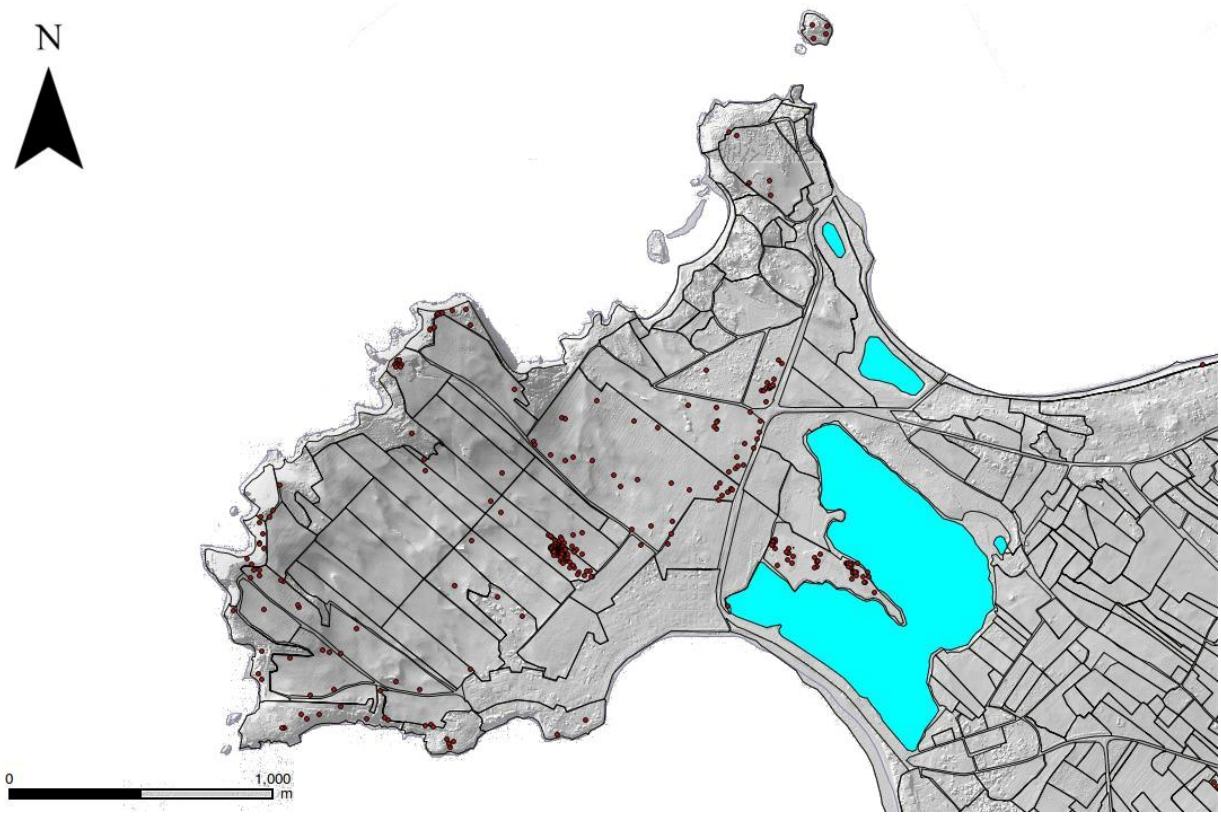

Fig. 5 - Collecting points in the area 1 and 3.

Fig. 6 - Collecting points in the area 2.

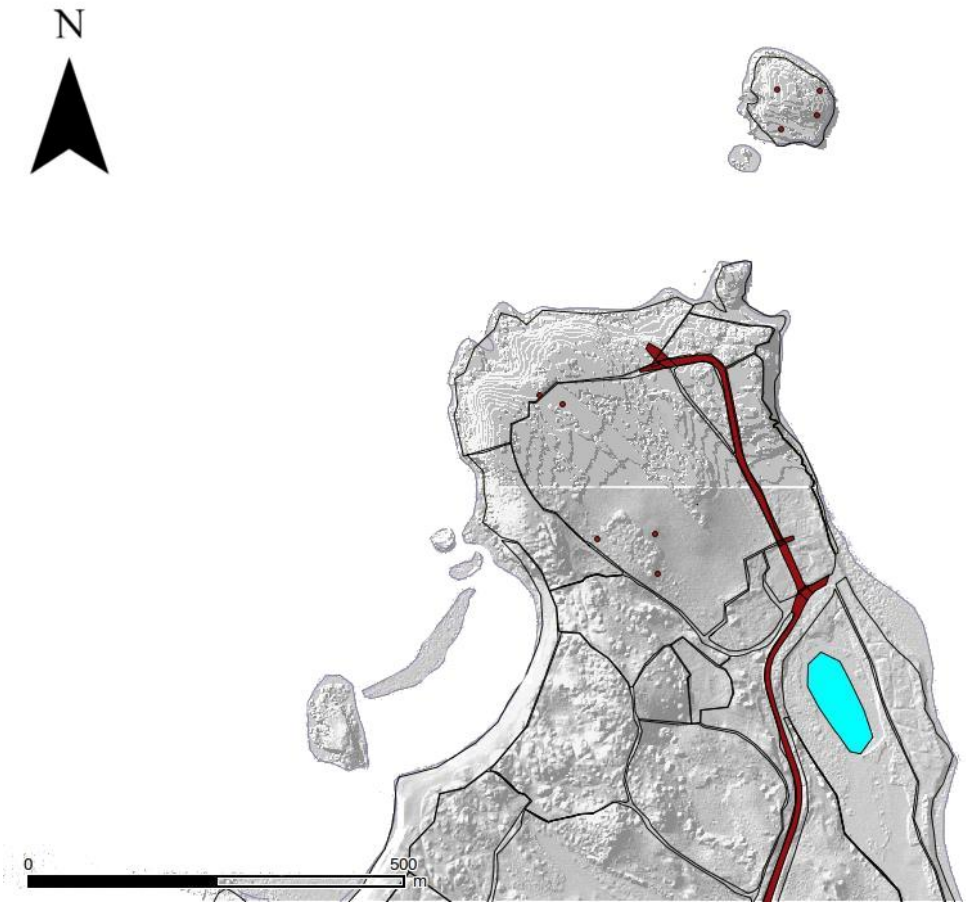

Fig. 7 - Collecting points in the area 3.

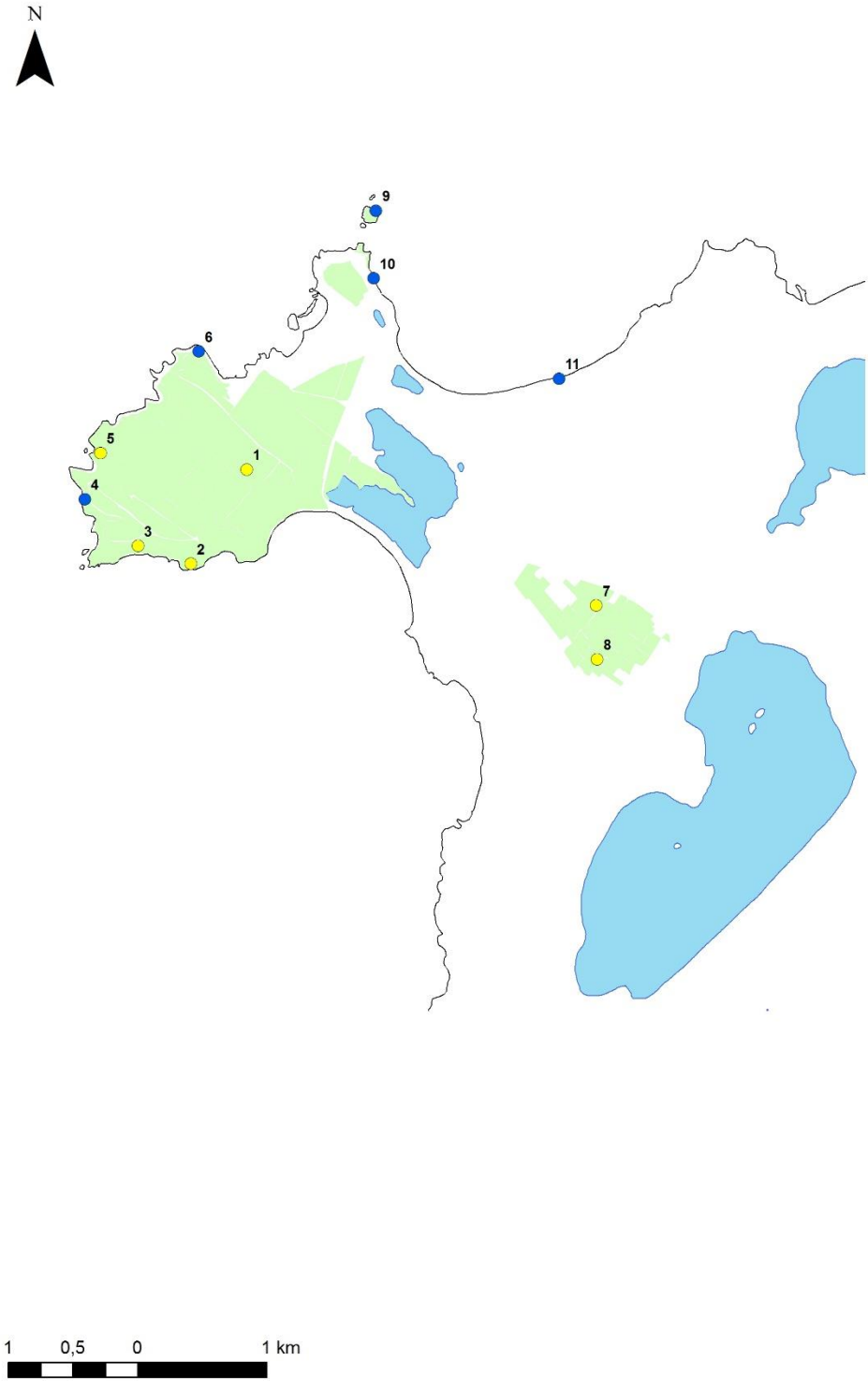

Fig. 8 - Already known (Blue) and new sites (yellow): 1 – Sa Chea Manna; 2 – Mandriola A; 3 – Mandriola B; 4 – Sa Turr'e sa Mora; 5 – Capo Mannu; 6 – Torre di Capo Mannu; 7 – Monte Benei B; 8 Monte Benei A; 9 – Sa Tonnara; 10 – Sa Pallosu; 11 – Sa Rocca Tunda.

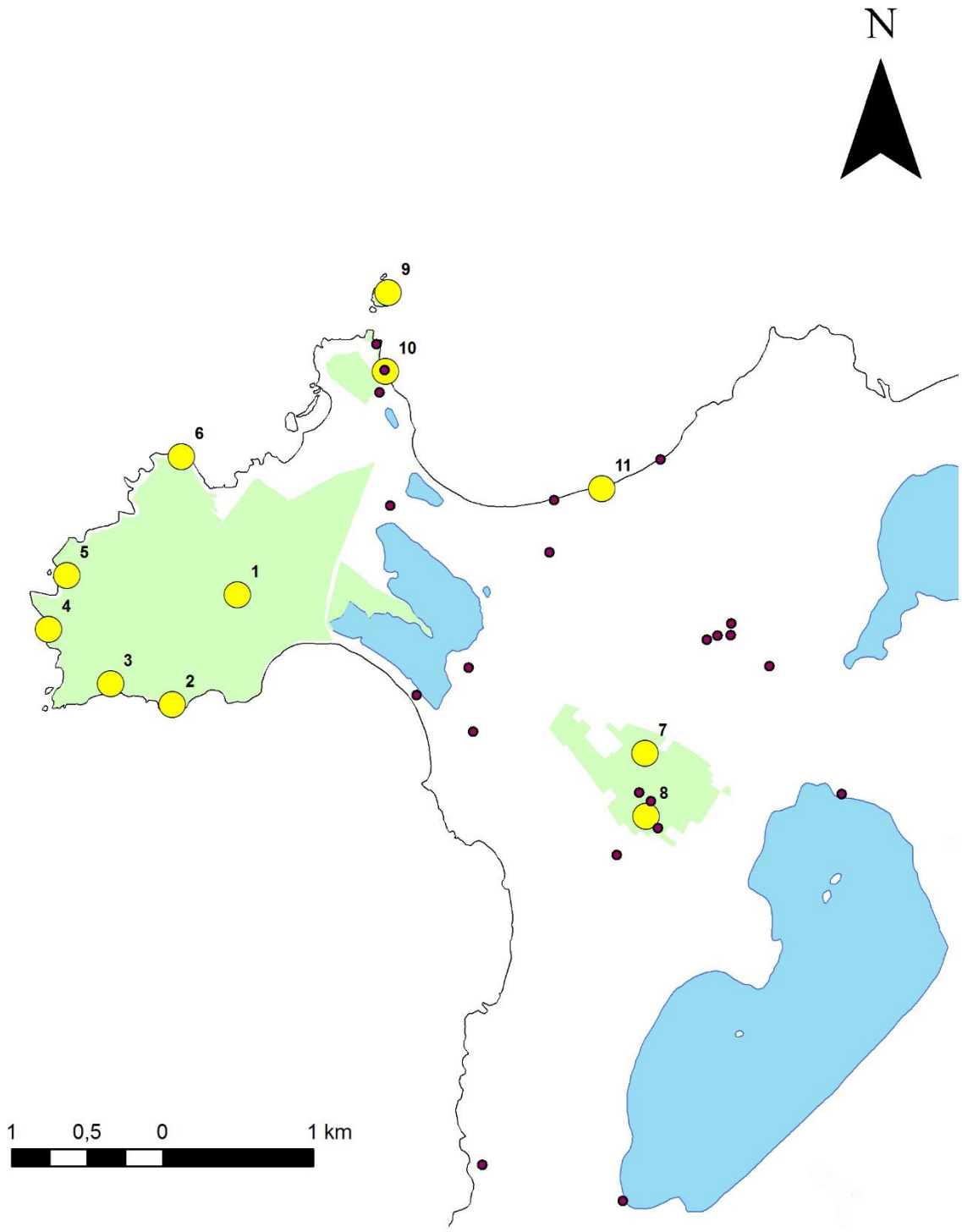

Fig. 9 - Sites investigated during the 2011 campaign (yellow: 1 – Sa Chea Manna; 2 – Mandriola A; 3 – Mandriola B; 4 – Sa Turr'e sa Mora; 5 – Capo mannu; 6 – Torre di Capo Mannu; 7 – Monte Benei A; 8 - Monte Benei B; 9 – Sa Tonnara; 10 – Su Pallosu; 11- Sa Rocca Tunda) and sites previously reported to be investigated in future campaigns (blue).

SITES LIST

Site 1 (40° 2 ' 9.19 'N, 8° 23 ' 33.17' E) – Sa Chea Manna

The site, located on 6/9/2011, is close to the present village of Mandriola, in an area known as Sa Chea Manna (Fig. 10). It is included in both TU 918 and 873: fields cultivated with wheat today but which were still not ploughed at the time of the survey. It has been not possible to identify structural remains of any kind, and the site definition has been made on the basis of the presence of a large concentration of pottery with a high number of fragments, extending to about 85 x 65m (Fig. 11), in sharp contrast to the surrounding soil.

Fig. 10 - Site n. 1 – Sa Chea Manna. In red the extent of the ceramic dispersion.

Fig. 11 - Sa Chea Manna.

The material collected is almost exclusively ceramic, which, according to an initial macroscopic examination, can be attributed to a historical era and probably a temporal phase after the 3rd century BC. We found black paint ceramic material alongside late-antique bowls with a forked rim. There are also some fragments of *embrice* (roman-phase tile).

Site 2 (40° 1'45.33'N, 8°23'15.12'E) – Mandriola A

This site was discovered on 7/9/2011. It is located in TU 509, to the SW of the modern village of Madriola, in a bushy area that directly leans out on the southern shores of the Capo Mannu promontory (Fig. 12). It is a small rectangular building of which two straight orthogonal dry stone walls (sandstone and limestone) remain, 5.30 m and 3.20 m long respectively. The rest of the building is covered by vegetation and partially buried (Fig. 13). In the immediate surrounding area some fragments of medieval or modern pottery were found.

Fig. 12 - Site n. 2 – Mandriola A.

Fig. 13 - Site n. 2: Mandriola A. On the right one of the two walls identified during the survey.

Site 3 (40° 1'49.74'N, 8°22'57.74'E) – Mandriola B

This site was discovered on 7/9/2011. It is located in TU 548, a bushy area covered by Mediterranean scrub in the southern part of the Capo Mannu promontory very close to the coastline and quite near to the modern path that leads to the western shores of the area (Fig. 14). It is a stone alignment of medium size flanked by two round rocks (sandstone and limestone). No pottery or any other material was found in the surrounding area (Fig. 15).

Fig. 14 - Site n. 3 – Mandriola B.

Fig. 15 - Site n. 3 – Mandriola B. base of the visible wall.

Site 4 (40° 2'1.40'N, 8°22'40.30'E) – Sa Turr'e sa Mora

Catalogued under this title is the site of Sa Turr'e Sa Mora, the westernmost of the watchtowers of the Spanish phase located in the area (Fig. 16), the first historical mention of which is dated to the year 1639. The construction of the structure, however, probably dates back to several decades earlier. It is part of a large-scale defensive system designed and built by the Spanish Government of Felipe II in the second half of the 16th century, in order to cope with the unbearable number of raids carried out by Muslim pirates groups who had their bases in North Africa (Anatra et al. 1989).

Fig. 16 - Site n. 4 – Sa Turr'e sa Mora.

The structure is currently in poor condition. It is a single-story tower, which belongs to the category of the so-called torrezillas, which were almost exclusively used as observation points on the large coastal stretches and were manned by two soldiers armed with a spingarda and two rifles.

We decided to collect a sample of the large amount of pottery in the area, given the presence of a huge number of broken ceramic slabs and those of minute dimensions associated with both the construction and later reuses of the structure (Fig. 17). An iron knife was found in the area close to the tower.

Fig. 17 - Site n. 4 – Sa Turr'e sa Mora. Density of archeological material present on the ground.

Site 5 (40° 2'13.10'N, 8°22'45.25'E) – Capo Mannu

This site, located in TU 821 and discovered on 7/9/2011, lies in an area covered with Mediterranean scrub on the northern cliff of Capo Mannu, immediately behind a narrow pathway to the east of the modern lighthouse (Fig. 18, 19,22).

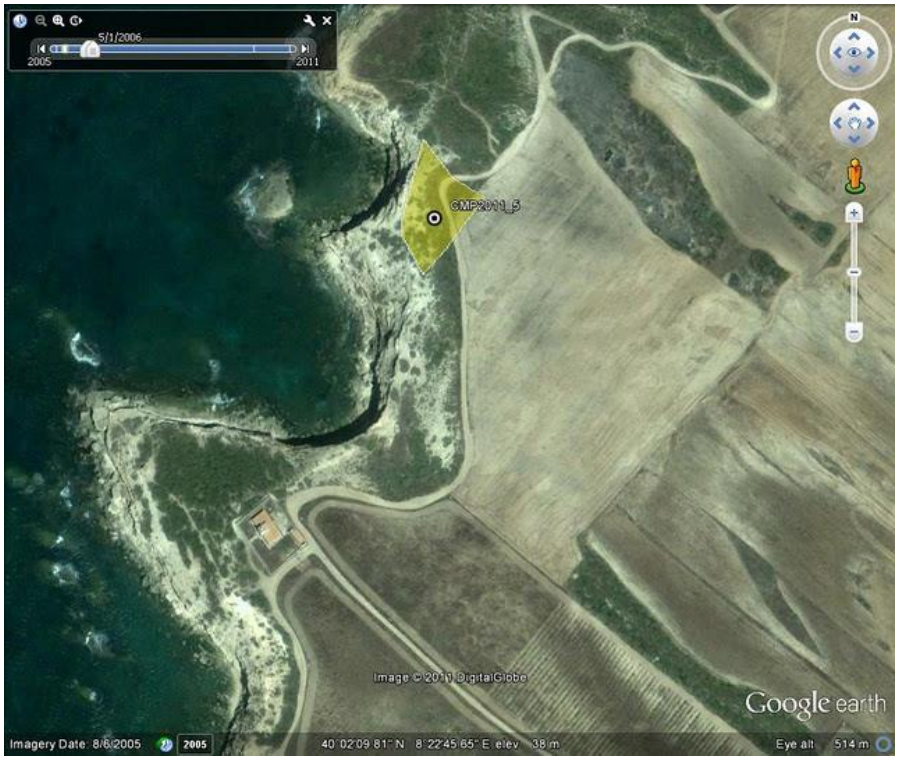

Fig. 18 - Site n. 5 – Capo Mannu. In Yellow the extent of the ceramic dispersion.

Fig. 19 - Site n. 5 – Capo Mannu. View from the modern lighthouse (direction S-N). The black arrow indicates the site.

Fig. 20 - Site n. 5 – Capo Mannu. Potsherds density on the surface.

The identification has been made possible due to the presence of a significant concentration of ceramic material and shells spread across an area of 50 x 40m (Fig. 20), which corresponds to a small mound. A small road cuts the area in two, probably penetrating part of the original deposit, and revealing the presence of at least one straight wall consisting of sandstone slabs (Fig. 21), still visible on the surface of the pathway itself.

Fig. 21 – Site n. 5 – Capo Mannu. Part of a sandstone wall emerging from the path.

Fig. 22 - Site n. 5 – Capo Mannu. View of the modern lighthouse from the site (direction N-S).

The collected pottery is dateable, on the basis of a quick macroscopic analysis, to a period following to the IV century B.C., although some pieces show similarities in firing and fabric features to indigenous materials attributable to the Early Iron Age phase – 10th – 8th cent. B.C. (Castangia and Mulargia this volume).

Site 6 (40° 2'38.93'N, 8°23'17.23'E) – Torre Capo Mannu

This site is another Spanish phase watchtower, traditionally called Capo Mannu Tower, which overlooks the northern coast of the promontory (Fig. 23). As with Sa Turr'e Sa Mora, the first historical attestation of the structure is dated to 1639. The condition of the building is presently quite poor and it is a tower with only one floor, belonging to the category of the so-called *torrezillas*.

Fig 23 - Site n. 6 Torre di Capo Mannu.

A sample of archaeological materials was collected on the site, given the presence of a significant number of broken sherds of minute dimensions associated with a work of construction and following reuses (Fig. 24). It was not therefore considered appropriate to proceed with a total collection of materials.

Fig. 24 - Site n. 6 – Torre di Capo Mannu. Potsherds density on the surface.

Site 7 (40° 1'35.45'N, 8°25'27.95'E) – Monte Benei B

This site was identified on 12/9/2011 in the area known as 'Benei', on the north-western slopes of the homonymous hill, in the TUs 362, 369, 375, 377, 380, 387, 391, 393, 394, 398, 427, 430, 433. Parts of these units have been affected by the installation of afforestation in recent years, particularly on the land owned by Mr. Salvatore Pinna, who kindly allowed the team to operate within his properties (TUs 339, 319, 347, 352, 359, 375, 394).

The area, as well as the presence of a Neolithic settlement nearby (1980 –the settlement which Atzeni named 'Sale Porcus'), has already featured in literature for the discovery of fragments of *kernophoroi* (Punic fired-clay ex-voto) and other elements of material culture attributable to a period between the 3rd century B.C. to the 4th A.D. It has been listed as the probable location of a small rural shrine dedicated to Demeter/Kore (Tore and Stiglitz 1987, pp. 647-648), of a typology common in Sardinia from the 4th century B.C. onwards. No clear structural remains have been found in the area, and the identification of the site has been made possible by the dispersion of archaeological material, especially ceramics and lithics (Fig. 25).

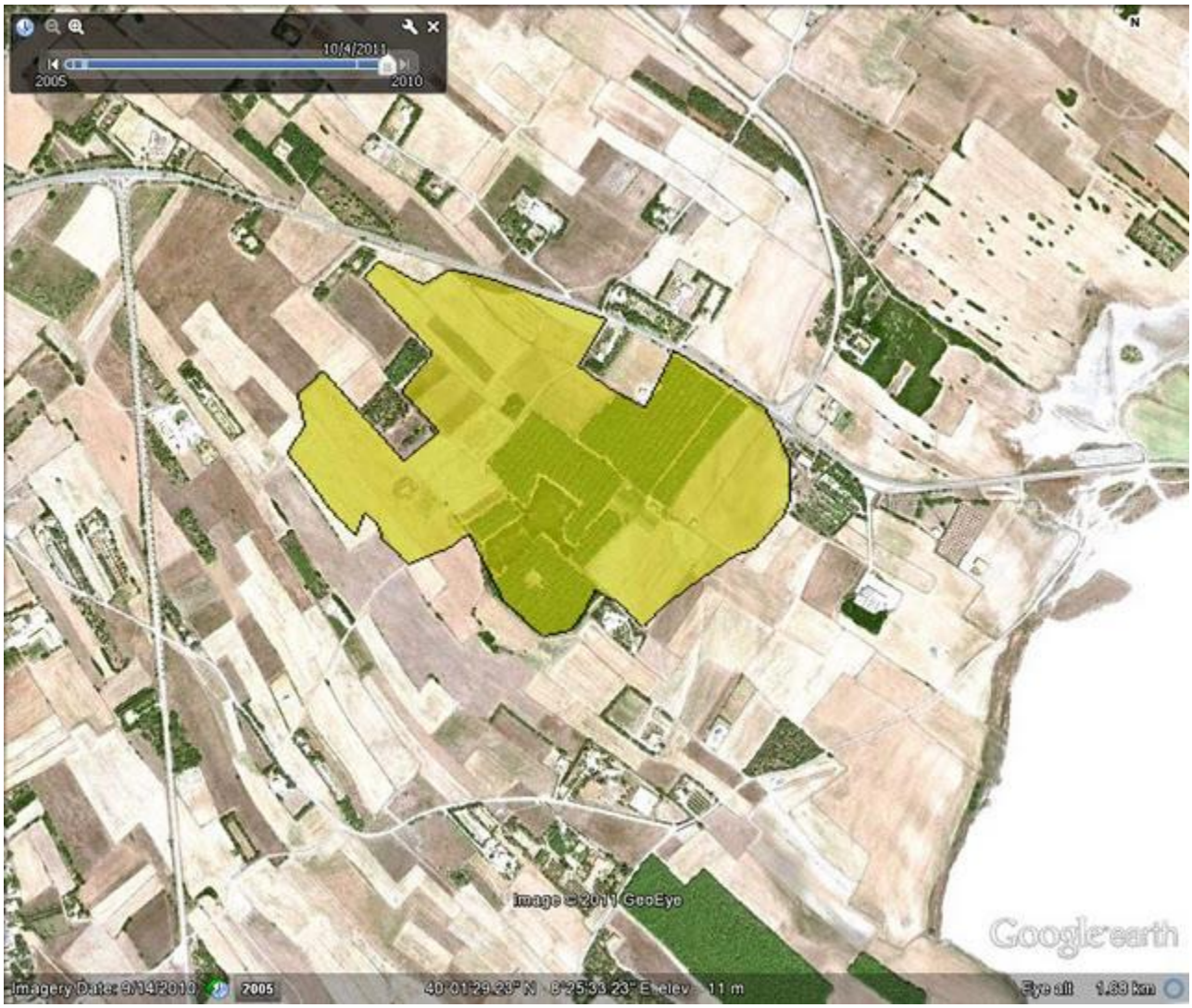

Fig. 25 - Site n. 7 – Monte Benei B. Hipothetical extent of the site, based on the ceramic and lithic findings.

Ceramics, fragments of tiles (Fig. 26) and some of the lithics found are attributable - following a macroscopic examination - to a period following the beginning of the 3rd century B.C. It seems plausible to assert, especially given the quality and quantity of the lithic instruments, as well as the discovery of various fragments of *amphorae*, that the area was occupied by a fairly large production-type settlement, within which would eventually be included a temple dedicated to Demeter/Kore (Fig. 27 and 28).

Fig. 26 - Site n. 7 – Monte Benei B. Tile fragments.

Fig. 27 - Site n.7 – Monte Benei B. Kernophoros fagment and grindstone (Roman phase).

Fig.28 - Site n.7 – Monte Benei B. Lithics.

The exact extent of the dispersion of material related to this site is to be defined further during the next survey campaigns.

Site 8 (40° 1'21.91'N, 8°25'28.33'E) – Monte Benei A

This site was located on 12/9/2011 in the area known as 'Benei', on the south-eastern slopes of the homonymous hill, in the TUs 246, 256, 278, 288, 299, 302, 305, 308, 315, 319, 332, 333. Parts of these units has been affected by the installation of afforestation in recent years, particularly the land owned by Mr. Salvatore Pinna, within which he kindly allowed the team to operate (UT 339, 319, 347, 352, 359, 375, 394).

There are no structural units in the area and the site has been identified on the basis of the presence and density of artifacts collected on the ground (Fig. 29). The area has been previously recognised as the result of a report by Prof. Atzeni on a pre-Nuragic age settlement (Atzeni 1978), as quoted by Tore and Stiglitz some years later (1987, pp. 647-648) and also recently confirmed by Alessandro Usai and Salvatore Sebis (personal communication).

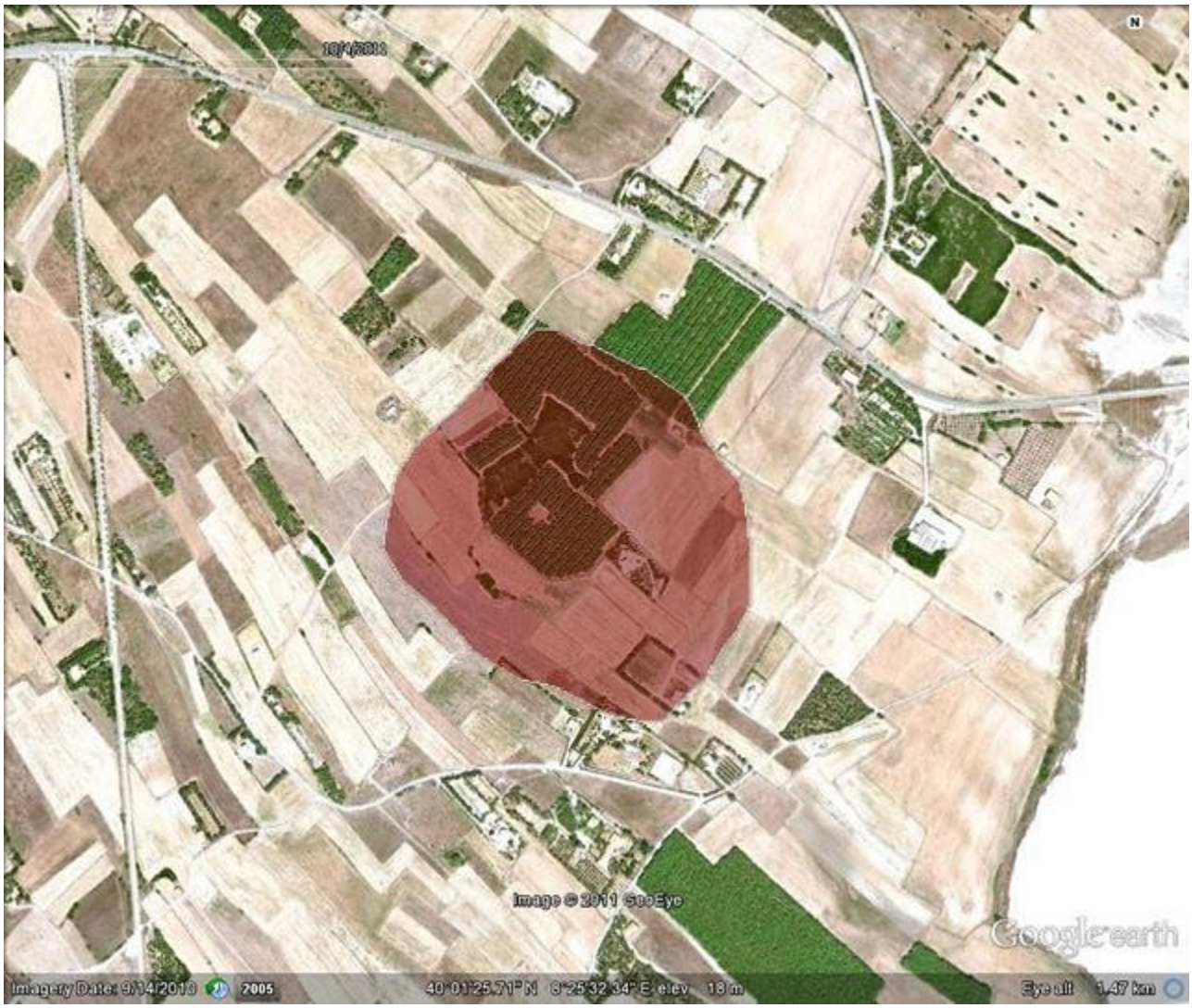

Fig. 29 - Site n. 8 – Monte Benei A. Hypothetical extent of the site, based on the lithic and ceramic findings.

The discovery of large quantities of lithic tools – created using flint, obsidian, basalt and granite- and of shells and decorated pottery belonging to the so-called Neolithic Ozieri tradition renders our topographical identification of the site pretty secure (Fig. 30). The area has also produced elements that might be attributable to a later date – i.e. Eneolithic phases- in particular various chipped axes in phonolite (Fig. 31, 32).

Fig. 30 - Site n. 8 – Monte Benei A. Obsidian point and ceramic decorated fragment belonging to the Ozieri phase (Late Neolithic).

Fig. 31 - Site n. 8 – Monte Benei A. "Axe" in trachytic phonolite.

Fig. 32 - Site n.8 – Monte Benei A. Fragments of "axes" in trachytic phonolite.

It has been possible to define only some of the limits of the site from the dispersion of lithic and ceramic material. In particular the Eastern, the Southern and Western limits seem quite well defined, but the Northern part is still elusive, and will be more clearly delineated during the next 2012 campaign.

A major difficulty arose in areas of afforestation, within which the visibility conditions are particularly misleading: outside the areas occupied by blocks of new trees, where the soil has been worked the most, the presence of artefacts is continuous and the density quite high up to the northern limit of the area of investigation. However, in those areas where there are trees, the materials of historical age were more visible, the density values drop steadily, and dispersion of prehistoric material decreased progressively.

Worthy of note is the presence inside unit 319- an area spared from afforestation with a diameter of about 20 meters- of many small size stones. At the south-east margin of this area lies a fig tree which was in the same place in the official 1954 aerial photo. Below this plant there is a pile of limestone and basalt slabs and stones, among which it has been possible to recognise some triangular worked pieces, which indicate the presence of some type of building, in all likelihood a Bronze Age monumental well-temple. Furthermore, near the fig plant we found a fragment of a stone pot belonging to the Ozieri phase, decorated with of a band of oblique lines on top of one of the feet (seemingly a so-called polipode vessel). This locale is likely to be the original context of a *bronzetto* figurine, currently held at the *Antiquarium Arborense* in Oristano, which represents a character offering two small *elsa gammata* knives and also of several supports for votive swords kept in the same museum, all said to come from the area of Benei.

Site 9 (40° 3'12.77'N, 8°24'13.24'E) – Sa Tonnara

This site, located on TU 129, a small island in front of the north part of the beach of Su Pallosu, corresponds precisely to the toponym Sa Tunnara, and hosts a Spanish phase tonnara - tuna-fishing base. The structure, known in the literature and cited by sources from the 17th century A.D. (Stiglitz 2006), includes various straight walls outcropping over the entire surface of the island and a cistern located on the western side, which could be a reuse of an older Punic age structure (Fig. 33, 34, 35).

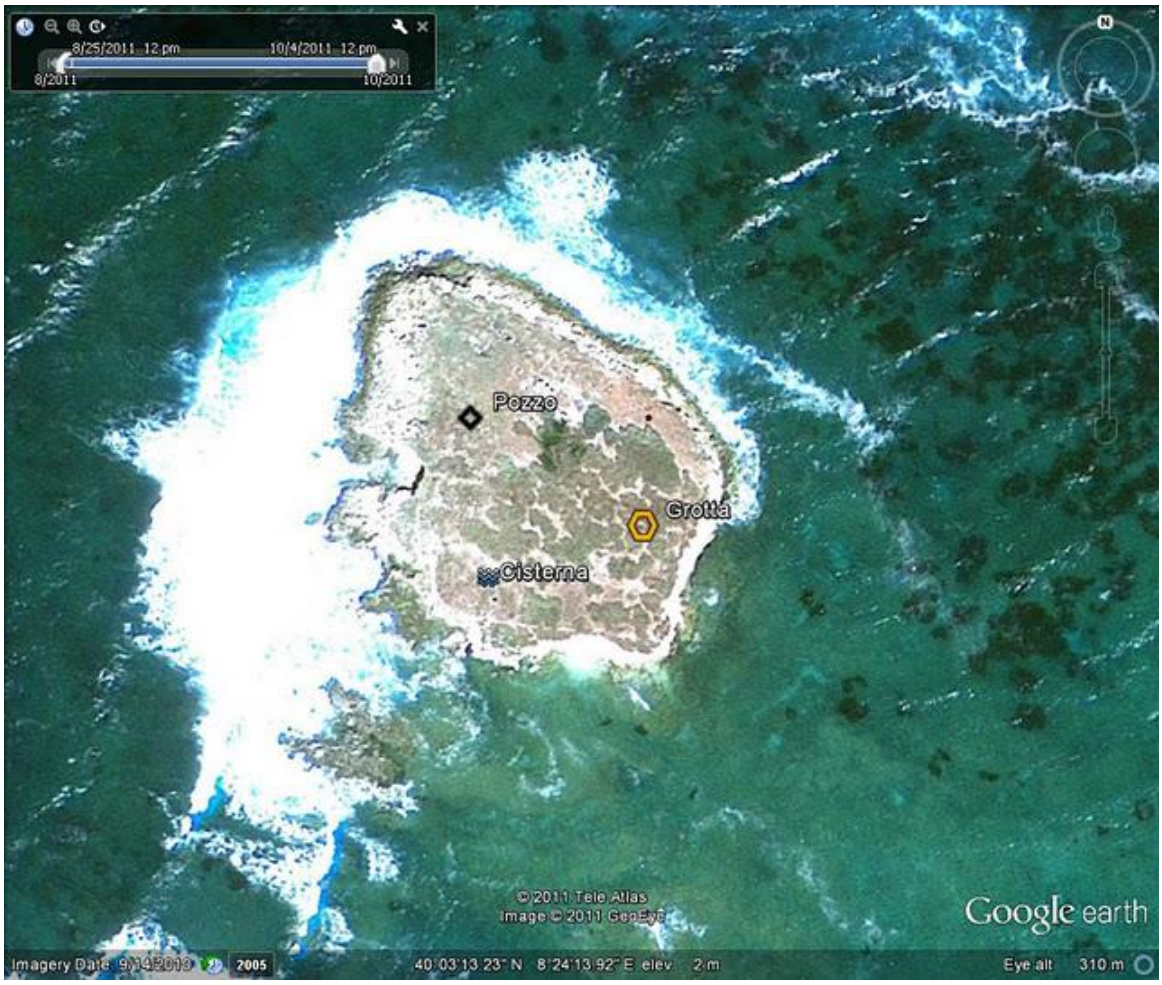

Fig. 33 - Site n.9 – Sa Tonnara. Structures on the island: well (black), cistern (blu), cave (yellow).

Fig. 34 - Site n.9 – Sa Tonnara. Cistern.

Fig. 35 - Site n.9 – Sa Tonnara. Cistern.

There is also a well and a small cave, located in the eastern part of the island (Fig. 33, 36, 37). Its dimensions are approximately 1.20m in height, with a maximum width of about 4-5m and depth of 6-7m. There are niches in the walls and clear signs of the use of fire inside. Some random obsidian flakes have been found in the northern part of the small island but no other archaeological material dated to the pre-modern era.

Fig. 36 - Site n.9 – Sa Tonnara. Cave.

Fig. 37 - Site n.9 – Sa Tonnara. Cave.

Site 10 (40° 2'57.67'N, 8°24'14.36'E) – Su Pallosu

The site of Su Pallosu has been catalogued by this name and is known in the literature for discoveries of footed cups with geometrical decoration (Falchi 2006) and of little multi-handled jars with lids (Castangia 2009 and 2011). It is located on the western side of the cove and was partially investigated in a stratigraphic sense in 2006 and 2007 (Fig. 38). The beach area was also known for the presence of a burial that was almost impossible to date (Lilliu 1950:506).

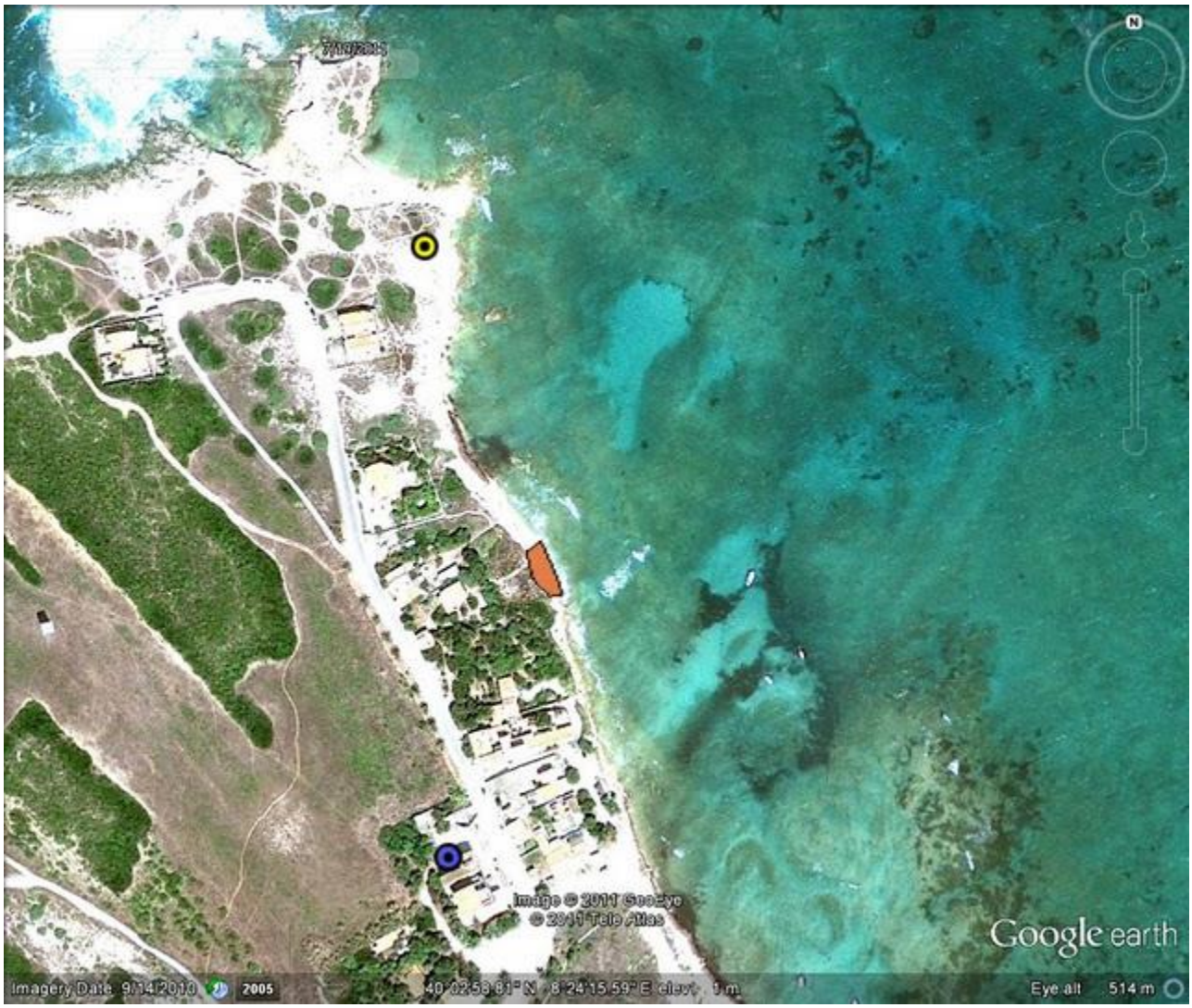

Fig. 38 - Site n. 10 – Su Pallosu. Red: site excavated in 2006 and 2007; yellow: greenstone axe collecting point; blue: footed cups collecting point.

The territorial unit 1291, within which the site is located, has been investigated with a systematic and geophysical survey (Bennett in this volume). The activity of erosion of the waves, especially in recent years, continuously exposes the partially excavated ceramic nuragic deposit and destroys the original stratigraphic conditions. In this sense, an urgent resumption of the excavations would be necessary in order to get full documentation of evidence which is highly at risk.

Two new boxes of materials, out of context but clearly coming from the nuragic deposit, have been collected and will be added to the material of the 2007 excavation. Most new materials can be dated to the Middle Bronze Age 2 phase (Castangia and Mulargia this volume), which until now had not been identified within the deposit. A fragment of a lid datable to the time of the so-called 'votive' age (Late Bronze) has also been collected: it shows certain residues of waxy resinous material on the bottom and is currently under specific residues analysis.

In the area we also found an interesting exemplar of a small polished axe, with which strong comparisons can be made with Neo-Eneolithic materials from various sites on the island and especially from the area of Sinis (Fig. 39). This item clearly indicates the presence of an occupation of the site prior to the Bronze Age. This seems to be confirmed by the finding of a so-called 'sacca' – actually an episode of organic material landfill consisting mostly of shells – which is clearly visible in a section of the dune very close to that in which the small axe has been found (Fig. 40, 41).

Fig. 39 - Site n.10 – Su Pallosu. Greenstone axe.

Fig. 40 - Site n.10 – Su Pallosu. Organic feature in the collecting point of the greenstone axe.

Fig. 41 - Su Pallosu. Organic feature in the collecting point of the greenstone axe.

Site 11 (40° 2'32.62'N, 8°25'15.27'E) – Sa Rocca Tunda

Under this name, the site of Sa Rocca Tunda (Stiglitz 1984), known in the literature as a 'monument of unknown type," has been catalogued. The site, located in a point that has been never defined precisely after the excavation, does not appear in the 1980s publication. It is a small monument, consisting of a base of small size stones without evidence of any raised ones, in an elongated ovoid provided with a well ring of about one meter deep. This structure, still unparalleled in the pre-and Protohistoric landscape of the island, has been interpreted from the outset as a monumental fountain, whose water would have surged from the small stone ring well. This interpretation still remains uncertain however. Ceramic materials from the excavations are attributable to the first phase of the Sardinian Iron Age.

The building appears almost totally covered in sand. A geophysical survey of the area has been carried out by Jeremy Bennett (Fig. 42), but the beach has not yet been systematically investigated.

Fig. 42 - Site n. 11 – Sa Rocca Tunda. Preparation of the geophysic survey in the area of the 1981 excavation.

ATELIER IN PORTO ALABE

A non-systematic survey exploration was carried out on 24/9/2011 in an area located 40 km north of the survey area, following the advice of geologist Prof. Salvatore Carboni. The area, located in the hills adjacent to the modern settlement of Porto Alabe in the municipality of Tresnuraghes (coord. 40° 15 ' 14.30 'N, 8° 28 ' 56.26' - Fig. 43, 44), had been designated by the above as rich in flint outcrops that would match the quality and colours of the material recovered in the area of Benei.

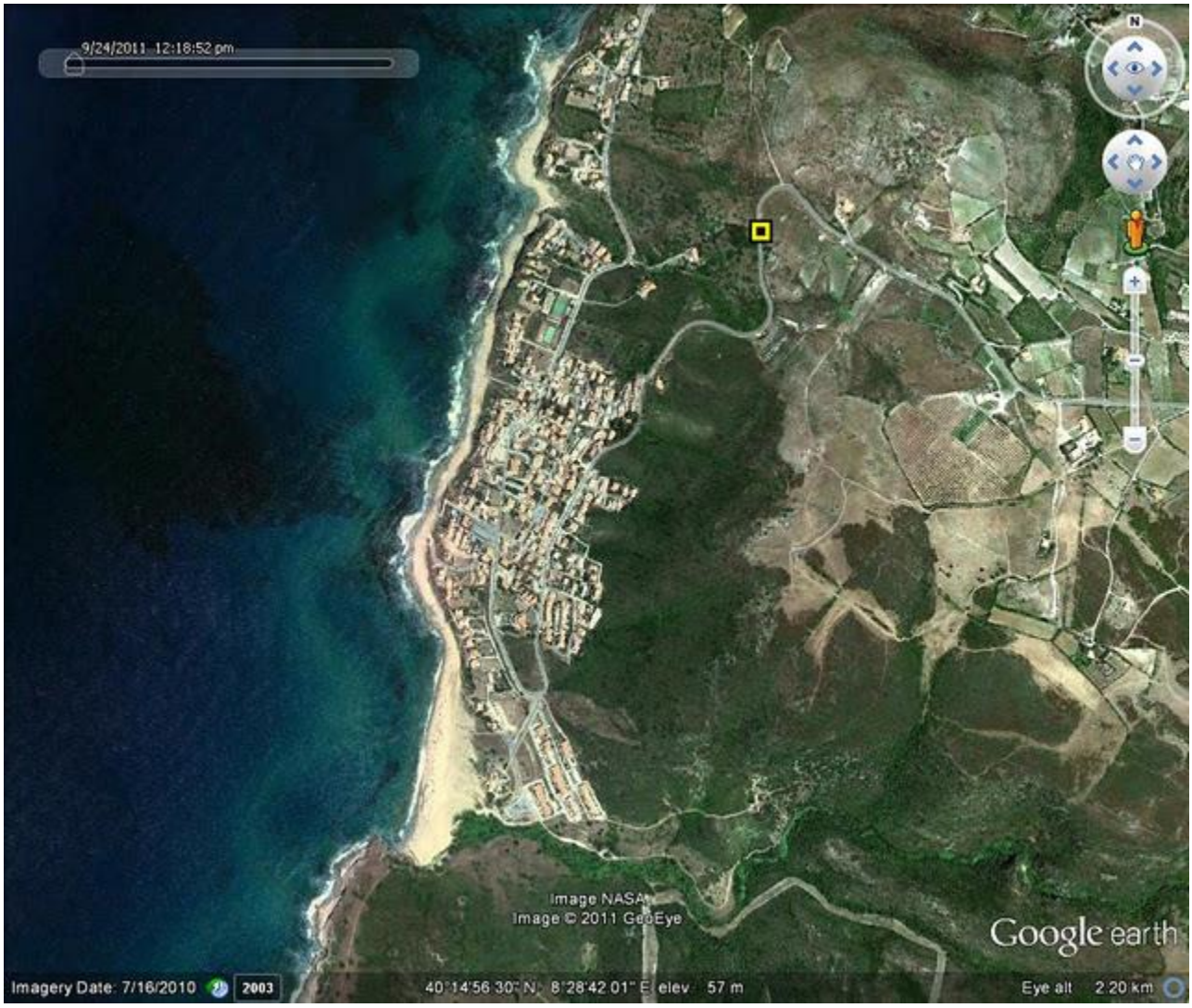

Fig. 43 - Porto Alabe. Atelier site nearby the modern coastal village.

Fig. 44 - Porto Alabe. Flint on the hills surroundig the modern village.

The survey allowed us to document in situ the presence of the same quality and colours of flint as found in the Neo-Eneolithic settlement of Site 8 – Monte Benei A (Fig. 45, 46). Various samples were collected and catalogued. It has also been possible to document the existence of a probable atelier site, due to the presence of materials that were clearly retouched or in some way the result of intentional working (Fig. 47 - Caruso, D'errico and Maffezzoli in this volume).

Fig. 45 - Porto Alabe. View from the site towards the S.

Fig. 46 - Porto Alabe. Flint sample.

Fig. 47 - Porto Alabe. Retouched blade.

DISCUSSION AND CONCLUSION

The survey campaign of September 2011 allowed for important advances in the definition and understanding of the archaeological landscape of the region of Capo Mannu. These are intended as the initial steps towards a total application of this methodology of spatial analysis to entire northern Sinis. This area, in fact, is particularly suitable to the methodology of surveying that has been adopted, for most of the land is ploughed periodically. This on the one hand, favours and indeed causes the devastation and the loss of monumental evidence so important in an archaeological landscape such as the Sardinian one, yet on the other hand allows for the identification of buried sites of archaeological material which are uncovered as a result of ploughing- something which is impossible in other areas of the territory, such as those used for grazing.

The first important fact that the intensive survey has confirmed is the very low density of archaeological material on the surface in the Area 1 (promontory of Capo Mannu). Despite this, it has been possible to identify new sites, which would be rather difficult to find using the traditional methodologies of landscape investigation adopted in Sardinia: in particular, the sites of Sa Chea Manna (Site 1) and Capo Mannu (Site 5), the first a rural village of the late Punic and Roman phases, the second a building probably connected with the practice of sight navigation of the coast in the same phase. The study of pottery in these sites is currently underway and preliminary results will be published soon.

In Area 2, the peninsula of Pallosu, the 2011 collections in the area of the beach allowed the identification of two 'new' chronological phases of occupation at the site, which no evidence taken from the emergency excavation of the site that took place in 2007 had so far suggested: Early and Medium Bronze Age 2, both prior to the construction of the earliest nuraghi in the region. The findings belonging to the various phases seem to indicate the presence of different functional designations of the area at different times. The new materials, in particular, allow us to hypothesise the presence of a pre-existing settlement at the level of the so-called 'votive deposit' –an interpretation that is still questionable in this sense.

As regards the so-called Area 3, the hill of Monte Benei, a dispersion of material of considerable size and quantitatively significant has been identified, never reported before from previous surveys. This is presumably due to the presence of two different settlements which overlap one another. It has been possible to partially define the range of the Neolithic settlement of Mount Benei from the distribution of lithic tools and shell remains. As the analysis of ceramic fragments confirms, it is a residential site dating to the full 4th millennium, which produced materials attributed in relative terms to the Ozieri phase (3800-3300 B.C.), however some lithic tools could be dated to later stages (Caruso et al. in this volume). During the next 2012 campaign this first definition will be further refined.

Following an apparent abandonment that goes from the end of the 3rd to the end of the 1st millennium B.C., this area was apparently reoccupied in the late Punic and Roman phase, starting from the 3rd century B.C. The interpretation of the area as the site of a rural sanctuary of Demeter/Kore (Tore and Stiglitz 1987) should be re-evaluated in light of the new evidence collected during the survey of 2011. Following the analysis of such evidence, the site should reasonably be interpreted as a living and productive entity. In support of this argument we can rely on the presence of a lithic tool-set of particular significance, and of numerous elements belonging to large *amphorae*. Within this complex a small local shrine would have been found whose presence is confirmed by the discovery of a new *kernophoros*.

Finally, the identification of the site of Porto Alabe, which is likely to be the source of the flint used in the site of Monte Benei, opened new and interesting interpretive perspectives on the Neolithic

phase of this area. Although caution should be maintained until the results of the comparative analysis of the raw material are published, the provenance of the Monte Benei lithic material from Porto Alabe – and therefore the existence of a strong network of contacts by sea between the communities of this area – remains the most plausible hypothesis by virtue of the presence of a high variability in the colours and textures of this flint which is typical of the area in question which is, moreover, located on a small bay.

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REFERENCES

Atzeni, E. (1978) La Dea Madre nelle culture prenuragiche. Studi Sardi, 24 (1975-1977), 3-69.

Anatra, B., Mattone, A. and Turtas, R. (1989) L'età moderna. Dagli aragonesi alla fine del dominio spagnolo. Milano: Jaca Book.

Castangia, G. (2009) Depositi costieri nuragici della regione del Sinis nella Tarda Età del Bronzo: il sito di Su Pallosu (San Vero Milis, OR). Evidenze per una interpretazione cultuale. Tesi di Laurea Triennale. 'Sapienza' Università di Roma. Available at: https://tracesintime.org/wp-content/uploads/2024/07/01_CASTANGIA_DA0001.pdf.

Castangia, G. (2011) Il deposito costiero nuragico di Su Pallosu (San Vero Milis-OR). In: Mastino, A., Spanu, P.G., Usai, A. and Zucca, R. (eds.), Tharros Felix IV. Roma: Carocci, 119-158.

Lilliu, G. (1950) Scoperte e scavi di antichità fattisi in Sardegna durante gli anni 1948 e 1949. Studi Sardi, 9 (1948-49), 394-561.

Spanu, P. G. (2006) Ricerche di archeologia subacquea nell'area del Korakodes portus. In: Mastinio, A., Spanu, P.G. and Zucca, R. (eds.) Tharros Felix 2. Roma: Carocci, 94-142.

Stiglitz, A. (1984), Un edificio nuragico di tipologia inedita dal Sinis settentrionale. In: Waldren, W.H., Chapman, R., Lewthwaite, J. and Kennard, R. (eds.), The Deya Conference of Prehistory. Early Settlement in the Western Mediterranean Islands and the Peripheral Areas. B.A.R., 229, 2. Oxford: Archaeopress, 725-742.

Stiglitz, A. (2006) Le saline del Capo Mannu e la localizzazione del Korakodes portus. Studi sull'entroterra tharrense. In: Mastinio, A., Spanu, P.G. and Zucca, R. (eds.) Tharros Felix 2. Roma: Carocci, 60-80.

Tore, G. and Stiglitz, A. (1987), L'insediamento preistorico e protostorico nel Sinis settentrionale. Ricerche e acquisizioni. In: La Sardegna nel Mediterraneo tra il secondo e il primo millennio a. C., Atti del II Convegno di studi «Un millennio di relazioni fra la Sardegna e i Paesi del Mediterraneo» (Selargius-Cagliari 27-30 novembre 1986). Cagliari 1987, 96-105

Zucca, R. (2006) Le fonti sul Korakodes portus. In: Mastinio, A., Spanu, P.G. and Zucca, R. (eds.) Tharros Felix 2. Roma: Carocci ,11-32.