

1200 B.C.E. A Time of Breakdown – a Time of Progress in Southern Italy and Greece*(April 16 – 18, 2015, ÖHI Rom)***ABSTRACTS***Marco Bettelli****From the Aegean to the Ionian Sea: pottery, technology and people in the Plain of Sybaris in the Late Bronze Age**

Since many years the Plain of Sybaris in northeastern Calabria, especially thanks to the work of Renato Peroni, is one of the best case studies in order to investigate the different levels of interaction between local communities and people from the Aegean in the Late Bronze Age. It became possible through the excavations, in particular at Broglio di Trebisacce and Torre Mordillo (CS), which yielded an outstanding amount and variety of pottery classes related to Aegean technology and style such as painted Mycenaean pottery and its later derivations, wheel-made Grey ware of Minyan technology, large containers probably inspired by Aegean-type pithoi (dolía). A wide-ranging strategy of archaeometric research involving all these different wares was also carried out. The integration of an archaeometric dimension into archaeological research has allowed to identify a large amount of Aegean-type pottery locally produced, together with some imports. The long duration of interaction – several centuries – in the fields of trade and ceramic production, makes it necessary to investigate if and when significant changes may have occurred, in terms of imports, local products, function, typology and style of the Aegean-type pottery. This analysis may also help to clarify a complex transition period as that between the end of the thirteenth and the beginning of the twelfth cent. B.C., both in Italy and in Mycenaean Greece.

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*Elisabetta Borgna****The Mycenaean pottery from the tombs of the Trapeza, Aigion: a western perspective**

The Mycenaean cemetery of the Trapeza, 7 km inland from Aigion, in central Achaea, has been submitted to systematic investigations since 2012; the data from the excavation of two chamber tombs, supported by the evidence of several stray finds kept at the Aigion museum and coming from the funerary area, point to a long-lasting occupation going from LH IIIA 1 well into the LBA/EIA transition. The life-cycle of the tombs seems to have been punctuated by some discontinuities, consisting in abandonments followed by reopenings, reuse and a substantial occupation in the postpalatial period: then ritual acts and cults to the dead were performed, which left relevant hints in the archaeological record. This contribution aims at introducing the Mycenaean pottery of the Trapeza by considering in particular its role in the East-West oriented relationships involving the Eastern Mediterranean, the Aegean and the Adriatic regions via the Corinthian sea. A Ionian-Adriatic connection seems to have played a role in particular in the most recent use of the tombs, well into LH IIIC late and SubMycenaean, as regards both pottery style and patterns of religious symbolism and ritual practices.

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Punta di Zambrone (Calabria, Italy) and the recent Bronze Age in the Southern Tyrrhenian Region

The contribution to be submitted is based on the conspicuous set of impasto pottery fragments dating to the Recent Bronze Age (mainly 13th and early/middle 12th century BC) and mainly found in the layers of ash filling part of the defensive ditch of the site of Punta di Zambrone (Calabria, Italy), dug up in 2011–2013 within the international research project conducted by the University of Naples Federico II and OREA. The study of these finds, currently underway for the purposes of a PhD at the University of Naples Federico II, integrated with the re-examination of ceramic materials from the Ausonio I settlement on the acropolis of Lipari, found in the 50's and 60's of the last century by Luigi Bernabò Brea and Madeleine Cavalier, is providing a large amount of new data that can lead to a better definition of the archaeological sub-Apenninic aspect, typical for the southern Tyrrhenian region of Italy, that could be called "Ausonian". Here, we intend to present the results of this study, which can contribute to a refined interpretation of cultural processes taking place in the southern Tyrrhenian region between the 13th and 12th centuries BC.

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Ancient DNA from Punta di Zambrone?

Depending on the state of preservation, human remains may offer a broad variety of 'encrypted' information on living conditions as well as circumstances of death of individuals, groups and societies. Naturally hard tissue remains are available for analysis: When interpreting and discussing the results, one should be aware, that the objects under investigation mirror only a temporal section: Circumstances of life, that have manifested on bones and teeth at time of death, modified by post mortem influence during taphonomy and diagenesis.

Aside of material objects and written traditions, biogenic, especially human remains represent a special category of 'historical tradition' for archaeological and historical research. Employment of adapted techniques from physical anthropology, forensics, radiology, analytical chemistry, physics, molecular biology (ancient DNA analysis) etc. allows to read parameters like sex, age at death, ancestry, provenance, migration and residence, hereditary and infectious diseases, injuries and traumas, traits of medical treatment etc., sometimes even cause a manner of death and post mortal incidents. Consequently, a synoptic read-out is to be compared with other written and material sources.

In the course of archaeological excavation at Punta di Zambrone hard tissue remains have been unearthed, mainly consisting of animal bones, but also comprising some human skeletal fragments. Four human bone fragments have been chosen for ancient DNA analysis: Unfortunately no nuclear DNA was detectable but mitochondrial DNA of moderately poor quality.

This paper gives an introduction on the potentials and limits of ancient DNA techniques, procedural and technical recommendations and a summary and interpretation of the results.

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The Olive tree in the cultural landscape of Punta di Zambrone during the Bronze Age

The kind of agriculture based upon the triple cereals – olives – grapevines, which constituted the basis for the Mediterranean economy until recent history, arose in the Near East at the beginning of the metal age and it represented the basis of the development of proto-urban civilizations.

The olive tree, *Olea europaea* L. (Oleaceae), is the most important fruit tree in the basin. Since the Bronze Age, the wealth of many Mediterranean peoples centred around the cultivation of olives, which provided valuable storable oil as well as edible fruits.

In this geographical area, two distinct groups of olive genus can be ascribed: one which includes all wild forms (*Olea europaea* L. var. *sylvestris*), and another which includes all the cultivated forms (*Olea europaea* L. var. *europaea*). Based on the anatomy of the wood it is not possible to tell the two groups apart.

On the domestication of the olive, there are two main theories:

A monocentric one which puts the first olive domestication at about 6000 BP in the Near East and later spreading starting from the first millennium B.C. thanks to the Phoenicians, Etruscans, Greeks and Romans.

A second theory, called polycentric, says that the olive cultivation cannot be collocated in a single geographical area in the Near East and that some domestication also took place in the western Mediterranean area, independent and in different periods.

The first confirmed evidence of proper olive tree cultivation has been found in Palestine, in Teleilat el-Ghassul (in modern Jordan), north of the Dead Sea during the Chalcolithic: various well-preserved olive kernels were found. Olive tree cultivation was then exported and spread first in the Greek peninsula and then in Italy by the Minoans, inhabitants of the Cyclades, and finally by the Mycenaeans. At first olives were exported simply as ready product then olive trees and cultivation techniques were exported, too.

This paper will show the reconstruction of the vegetation and the agricultural landscape of Punta di Zambrone, coastal settlement, during the Bronze Age, explaining the modality and the timings according to which the kind of vegetation changed in a period of 1000 years by human activities based on data from charcoal analysis. At the moment, 1200 coal samples have been analyzed: 800 of Recent Bronze Age date and 400 of Ancient Bronze Age date, covering the entire duration of the site.

Particular emphasis will be given to the Recent Bronze Age and to the olive question, trying to understand if it is a first form of direct cultivation or a particular phase of semi-domestication.

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Girolamo Fiorentino*

1200 B.C.E. A Time of Breakdown?

Archaeobotanic evidences during the Bronze Age in southern Italy

The paper presents a regional diachronic overview (from EBA to LBA) of Bronze Age archaeobotanical data derived from analysis of charcoals and seed/fruits from several archaeological sites distributed across the region of Apulia. The aim is to contribute to the debate on subsistence strategies and their transformation during a period of change in environmental as well as cultural systems. It follows an integrated approach, in which archaeobotanical evidence is discussed diachronically, taking into account natural and social dynamics, in order to understand whether, how and why Bronze Age communities in Apulia adapted or modified their subsistence strategies in terms of plant exploitation.

The different lines of evidences explored provide the basis for a discussion of the possible reasons for changes in subsistence strategies during the course of the Bronze Age in the area. What emerges from our

analysis are major transformations of annual crop husbandry, seasonal harvesting strategies and storage technologies, one in the Middle and one in the Late Bronze Age: while the first transformation appears to be linked to climate forces, the latter seems to be the result of social and political strategies.

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Macroscopic and petrographic investigations on the pottery production of Punta di Zambrone

40 pottery sherds found in the Recent Bronze Age levels of Punta di Zambrone on the Tyrrhenian coast of Calabria were selected according to a wide macroscopic classification and analyzed under the polarizing microscope. The aim was to recognize differences in the production techniques and raw material procurement and to identify imported vessels. With respect to closed shapes, open shapes are distinguished by different supply, paste preparation, firing and finishing procedures and by a greater raw material variability. Such differences might be assignable to functional aspects and distinct manufacturing traditions. Some organic-tempered open shapes were used for cooking in the dry mode, as demonstrated by interior sooting and abrasive traces. Imports are only restricted to very few closed shapes (e.g. one large container and one jug) from volcanic areas not consistent with the opposite Aeolian archipelago.

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Roca and its Aegean contacts in the Recent Bronze Age

Roca is the settlement that has yielded the largest quantity of Aegean-type pottery in the Central Mediterranean, over 5000 fragments recovered in contexts datable between the Middle Bronze Age 3 and the Final Bronze Age 2.

The study of this class of pottery and the results of compositional analysis indicate, already in the earliest phases, the attestation in the site, along with imports, also of a local production inspired by both Mycenaean and Minoan pottery.

The largest proportion of this fine painted pottery occurs exactly in the decades around 1200 BC, when a number of elements suggest the existence at Roca of a group of people coming from the Aegean and of a 'community colony', possibly similar to the model described by K. Branigan.

Such a situation led to profound transformations of the main cultural features of the site that influenced considerably its history.

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Khania in the 13th and 12th century B.C.

The 13th century B.C. was a prosperous period not only for Khania in West Crete but indeed for the entire island. In this period Khania had frequent contacts with most parts of the island and direct and/or indirect relations with the central Mediterranean, the Greek mainland, Cyprus and the Levant. The town had two successive settlements during this period. After some alterations, they were followed by a third settlement

at the same place – only to be abandoned around the mid 12th century B.C. The character of these settlements will be presented, the nature of their internal Cretan contacts and external west-north-east relations as well as how and when these relations came to an end will be illuminated. All aspects, together with more or less clear signs of a new economic and social organization, will throw some light on the effects of the historical changes in Khania and Crete during the troubled years in the decades around 1200 B.C.

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The Recent Bronze Age settlement of Punta di Zambrone in its Mediterranean context

Punta di Zambrone is a Bronze Age settlement situated about 8 km northeast of Tropea in southern Calabria (Province of Vibo Valentia). The site is strategically located on granite promontory projecting into the Tyrrhenian Sea and well suited for maritime activities, as it could visually control large parts of the Tyrrhenian coast of Italy, the Aeolian archipelago and the Sea north of Sicily. Punta di Zambrone was inhabited since an early phase of the Early Bronze Age, i. e. the end of the third millennium B.C.E.

A major settlement phase with strong evidence for Aegean contacts is dated to the Recent Bronze Age (RBA). It flourished during the 13th century and came to an abrupt end around 1200 B.C.E. Following an initial geophysical prospection, various sectors have been excavated, particularly its fortification ditch, from 2011 to 2013 by an international team. The RBA ditch was found to be filled with layers of different composition including, on top of the sequence, huge quantities of ash. These ashes were very rich in artifacts, archaeozoological as well as archaeobotanical remains and provide ideal conditions for reconstructing life in the settlement during its ultimate phase of existence.

We will contextualize the site in its regional and interregional setting and present hypotheses regarding its role during the critical years around 1200 that are marked by profound social and cultural changes in southern Italy on the one hand and the breakdown of the palace state in Greece followed by the emergence of post-palatial societies on the other. Those historical processes were mutually affecting and influencing each other in a complex manner. The material culture at Punta di Zambrone gives insight in a specific historical case, which needs to be understood as one part of a puzzle made up by many other sites providing the framework for its wider interpretation.

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Human remains from the filling of the Bronze Age fortification ditch of Punta di Zambrone (Italy)

In the course of archaeological excavation at Punta di Zambrone in the fortification ditch (area C) numerous human remains have been unearthed, beside other findings like animal bones and artifacts. The filling of the fortification ditch contains a large amount of plant ash, indicative of some burning event(s) dated to the 13th and early 12th centuries BC by means of artifacts and ¹⁴C dates.

A throughout anthropological survey of the recovered material was carried out to determine on the sex, age and health status of the disposed humans. Simultaneously, forensic investigations were conducted to elucidate the circumstances of death and the associated taphonomic processes.

After reconstruction of the severely fragmented remains, Minimum Number of Individuals (MNI) analysis revealed that the remains originate from at least two individuals. Most of the bone fragments could be assigned to a female at the early adult development stage. The skeletal fragments could be tentatively

assigned to a slightly younger individual; however, the very limited number of bone fragments recovered for this individual rendered macroscopic sexing effort elusive.

Dental hypoplasia was evident on a recovered canine tooth, indicating stress-induced perturbation of crown formation during childhood for one of the individuals. In addition, this individual also showed indications of new bone formation around the *porus acusticus externus* on the temporal bone, being suggestive of an inflammatory process at the outer ear region.

Remarkably, none of the human bone fragments exhibited burning marks; ruling out an immediate context with the assumed burning event(s). Taphonomic reconstruction of the excavation site suggested that the remains of at least one of the excavated individual have undergone multiple disturbances after death and deposit.

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Handmade burnished pottery in the palace of Ay. Vasileios, Laconia (Southern Greece)

The recent excavations on the hill of Ay. Vasileios have brought to light the remains of the so far missing palace in Laconia. After an uninterrupted occupation from the end of the Middle Bronze Age there is evidence of severe fire destruction that stroke the palace at the end of the 14th century B.C. However, large deposits containing pottery of the earliest LH III C period have been discovered, suggesting that the occupation on the hill continued. It is within the latter deposits where fragments of the so-called “handmade and burnished pottery” appeared for the first time at the palace of Ay. Vasileios. The shapes identified so far resemble Italian *impasto* pottery types. Although the corpus of the handmade and burnished pottery from Ay. Vasileios is still limited, the new material adds significantly to our knowledge of the distribution of Italian-type pottery, since similar material was known in Laconia mainly from the Menelaion, the other major centre of the region.

In an attempt to understand the presence of the Italian type pottery in Ay. Vasileios we will compare the identified material with its distribution in other Mycenaean centres. Moreover, we will try to reconstruct the function of this pottery class and its relation to the local Mycenaean wares.

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Staple foods in Zambrone during the Bronze Age

A total of about 300 soil samples was recovered during the excavations 2011–13 and the plant remains were extracted using the conventional flotation technique. All plant remains are charred. The identified plant remains can be assigned to three groups: staple crops (cereals and pulses), fruits and nuts, and wild herbaceous plants. They cover a time span from the Early Bronze Age (EBA) to the Recent Bronze Age (RBA) with a hiatus during the Middle Bronze Age.

During the Early Bronze Age emmer wheat is the dominant crop. Both chaff and grain were recovered. Barley and field bean are present but of minor importance and occur only in some of the samples.

During the RBA the importance of the individual staple crops is more evenly spread. The frequency of cultivated pulses increases and field bean is now present in at least half of the samples. Emmer wheat

reaches more than 50% and barley about 40%. However, the most important cereal is a newcomer, broomcorn millet, which is present in 60% of all samples.

Present only in the RBA are some acorns while grapevine appears in half of the samples.

The proportion of wild herbaceous plants is low in both phases.

What does this mean?

Samples from the EBA are dominated by emmer wheat. Only some samples contain barley and some field bean. The proportion of wild species (weeds) is only 10 %. The recovered plant remains can therefore be interpreted as clean food supply, ready for consumption. Was Zambrone a consumer place where people were supplied with good quality food products which did not require further processing?

Samples from the RBA contain even less remains of wild species, only 2 %, again suggesting a clean food supply. The new broomcorn millet reaches frequencies of 60%, grapevine 50%, and acorn 15 % of all samples. This demonstrates an enormous change in daily food consumption with an emphasis on new cultivars such as the quickly growing broomcorn millet and the collection (or perhaps growing) of grapevine fruits and the use of acorns.

Compared to archaeobotanical results from other European Bronze Age sites (see Stika und Heiss in the Oxford Handbook of the European Bronze Age), Zambrone is unusual: nowhere else during the EBA there is such a high frequency emmer wheat, and so little barley present.

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Recent Bronze Age Sicily and the Mediterranean

The social and cultural building of Recent Bronze Age (RBA: ca. 1.300-1.150 BCE) Sicily has its roots in the last part of the Middle Bronze Age: a strong continuity can be envisaged in the main settlements, mostly (but not only) on the coastal fringe, through the quoted periods. The development of the coastal settlements is congruent with an increasing contact with the Aegean. In fact, such contacts had not been episodic, even in former periods (Early Bronze Age-start of MBA), but less widely distributed. The transformation during the RBA corresponds to an increasing importance of inland settlements, coupled with a parossistic testimony of Mediterranean contacts, well exemplified by the coastal site of Cannatello. The intensity of Central (i.e. Maltese and Sardinian) and Eastern (i.e. mainly Cypriot) Mediterranean contacts marks the phase, tracing a Mediterranean route of high relevance for the Sea Peoples debate. The following period (late RBA-Final Bronze Age) is characterized by ambivalent trends: on one side specific isolation from the Mediterranean, on the other a general cultural familiarity; heavy influence from mainland Italy and a marked insular character. These aspects can be seen as a result of the disruption of the powerful equilibria that made possible the RBA bloom of Sicily.

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Animal exploitation and forms of economic interaction in central and southern Italy during the 13th and 12th centuries BC

In this talk the animal remains from several contexts located in central and southern Italy and dated to the 13th and 12th centuries BC are discussed in view of our understanding of the dynamics of animal consumption and exploitation during the Recent Bronze Age. The resulting framework shows a complete

self-sufficiency in economic activities of subsistence of settlements, based on the contribution derived from agricultural and husbandry practices and on those derived from wild sources.

In central Italy the animal remains assemblage from Fosso Vaccina can be compared with that from Rome - Campidoglio for the dominant role of caprines; whereas a greater importance of cattle husbandry is documented at Monte Rovello and Banditella. Pigs remain the less important species at all sites, except for Vejano Borgo. Few data concerning the settlements located in southern Italy regard Coppa Nevigata, where caprines seems to prevail, and Roca, where the proportion of the main domesticated species are more balanced. Hunting must have been of secondary importance to the economies and the communities examined, even though local fluctuations that probably reflect local choices have been observed. Among the animals not mainly used as food source, the occurrence of the horse at several sites seems to confirm the hypothesis of a progressive diffusion and cultural appropriation of this animal between the Middle and the Recent and Final Bronze Age.

In addition to discussing animal exploitation at the mentioned sites, the talk will also investigate the economic interaction between communities. The study of animal remains from Bronze Age sites in fact may seem like an insignificant exercise as they generally come from already known animal species. Species occurrence and frequency can alone flatten the difference between sites and nullify the evidence of particular aspects that could be instead good indicators of forms of interaction between communities. Different models of husbandry practices reflected by mortality data and the representation of body parts will be used as indicators of diversification and specialization between sites in terms of primary economy. There are different purposes to which cattle and caprines husbandry can be variously oriented. An accentuation of one of the purposes could indicate forms of specialization and interaction between sites. The presence of large samples in a limited area may indicate the use of specific areas for specific activities but also forms of meat distribution. Movement of live animals could be read instead in different representation of age groups within a species. Evidence of specific activities can be reflected in animal samples with unique characters compared to those from other areas. A general identification of social and economic articulation can be read in the appearance of the bones of exotic animals, as they could have been a vehicle of social prestige.

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Ioannis Moschos*

Post-palatial Achaea

The privileges of facing West in an East-looking world

During the last years of the palatial period, West Achaea did not participate in the relatively limited, yet confirmed, contact of Mycenaean centres with the Italian peninsula. Some weapons and instruments of cosmetic use, which are related to Italian types, originate from Aegialeia and the area of Patras and they can be dated to the LH IIIC Early Period. These confirm the beginning of contact, within a frame that can hardly be defined in this particular period. However, it may possibly be connected with past mainland palatial relations and the presence in Achaea of refugees from the destroyed palatial centres.

Some unpublished 'impasto' sherds from Teichos Dymaion, which fall within the post-palatial period, not only allude to but explicitly betray the bilateral interest in contacts, evident in the northwestern shore of the Peloponnese.

The geographical re-definition of the Achaean 'partners' within the central Mediterranean resulted from the relevant freedom allowed by the political situation formulated in the aftermath of the destruction. These favourable circumstances, immediately following the upheaval, were just an external precondition to take advantage of. The turn towards the West was based predominantly upon the new regional political,

social and financial structures, which were quickly re-shaped in Achaea, adequate and ready to support the new choices of Achaea at the beginning of the LH IIIC Middle.

These contacts were, at least for the years to come, an additional lever of internal evolution. The increasing import of ready-made products and the transmission of technical know-how from the West not only influenced but also determined the local characteristics. Therefore, while interpreting the social, political and economical phenomena, we must take into account the scope and sort of these contacts. We should not overlook the fact that, on the grounds of the archaeological data, the Mycenaean of Achaea had fully adopted the new techniques of warfare and were self-sufficient in manufacturing products related to the Italian typology. Also it should be noted that the profits from these contacts involved the entire society and not merely a privileged leading group. Or, we should at least accept that this leading group was widely peopled. This element suggests that no part of the population was excluded. It also suggests that these connections did not define an element of authority in the hands of an elite class, at least not from the end of the LH IIIC Middle onwards.

The issue of contacts is probably slightly differentiated towards the end of the LH IIIC, and this might be partly due to internal changes, which played some role to the collapse of the Mycenaean world. At regional level, that era was marked by a second destruction of the Teichos Dymaion and a subsequent seemingly calm period before the Submycenaean shrinkage. The absence of Naue II type swords from graves is typical and may be associated possibly with a different orientation both at political and social level. Perhaps we should turn to Italy, to seek the lost traces of communication or the first Greek colonists.

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Composition and provenance of the metal finds from Punta di Zambrone

The fill of the Recent Bronze Age fortification ditch at Punta di Zambrone contained a number of metal artifacts, which are fragmented, but represent a remarkable array of types including dress accessories, tools, and weapons. The majority of the objects that can be classified by type were sampled and analyzed at the Curt-Engelhorn-Zentrum für Archäometrie (Mannheim). The chemical analyses by XRF showed that most of the metal artifacts are made of tin bronze, while a few lead objects add to the assemblage. In order to obtain data for deducing the provenance of these metal objects, additional lead isotope analyses were carried out by MC-ICP-MS.

The analytical results were compared to data with copper and lead ore deposits from the Mannheim data base and published analyses. Moreover, several ore deposits in southern Calabria were sampled and analyzed for testing the hypothesis that local copper and lead ores might have been used by the Recent Bronze Age population. Finally, some metal artifacts from neighbouring Bronze Age sites in Calabria were analyzed in order to interpret the data from Punta di Zambrone in a wider historical context.

In our paper, the analytical results from Punta di Zambrone and the region of southern Calabria will be discussed in a wider context of the Late Bronze Age in the Mediterranean.

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Micro sampling of strontium isotopes using laser ablation - preliminary results from Punta di Zambrone

Strontium isotope analysis of human and faunal enamel has the potential to reveal human childhood origins, and herding and other movements of animals. Recent developments have included laser ablation sampling which dramatically increases the spatial resolution at which strontium isotopes can be measured. This allows time series of changes in strontium isotopes to be measured along the growth axis of enamel, giving a highly time resolved measure of human and animal movement. Here we present the method and some examples of its application including our work attempting to identify the provenance of humans at the Bronze Age harbour site of Punta di Zambrone (possible inhabitants of the settlement or foreigners related to its destruction?) and to identify the extent of the agricultural catchment of this settlement through analysis of cattle, pig and other animal teeth.

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Coping with changes: social and economic developments at Coppa Nevigata during the 12th century BC.

In recent years excavation at Coppa Nevigata have been mostly focused on the Recent Bronze Age layers. Thus, we have been provided with new data about the organization of the settlement in this period and the different kinds of activities that were carried out at the site.

At the dawn of the 12th century BC socio-economic changes were in action. Good pointers on these changes are in particular the spatial rearrangement of the settlement, somehow entailing raising social inequality within the community, the increase of local specialized productions and exotic imports. As for the specialized productions, a fresh systematic study of the Mycenaean-type pottery from the site has cast some lights on both the specific characters of this production at the site and the spatial distribution of these shards.

On a more general perspective, Coppa Nevigata was involved in transmarine networks since the first half of the 2nd millennium BC and it had close ties especially with Dalmatia and northern Adriatic. Yet, unlike in the coeval southern Apulian centres, evidence of direct contacts with Mycenaean sailors is apparently lacking there till the Recent Bronze Age. The boom of Mycenaean-type pottery production at the site in the 12th century BC apparently contrasts with the predating situation and calls into question the presence of Aegean craftsmen at the site.

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Coastal landscapes at Punta di Zambrone and suitability for harbour facilities during the Bronze Age

The geomorphological context of the coasts in the neighborhood of Punta Zambrone, characterized by the presence of shoals and rocky cliffs, seems to have been unfavorable to the presence of stable and equipped landing places during the Protohistory, also in view of the exposure of the coast to dominant westerly waves.

The chances of landing were probably limited to the plain south of the cape. Behind this coastal plain there were, in fact, less inaccessible slopes compared to those north of the promontory, easier to climb in order to reach the plateau of the town headquarters for transporting merchandise.

Based on this assumption a geophysical survey has been realized and it highlighted the presence of a depressed area in the substratum behind the modern beach. The realization of a core, which will be made in February 2015, will allow calibration of the geophysical data and recovery of material which will be analysed by means of paleoecology, palynology and chronology. These analyses will allow us to define the nature of the depressed environment, identified by geophysics, and then to clarify the possible function that this area could have represented at the time of the settlement.

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Out of ashes – animal remains from Bronze Age Punta di Zambrone

Three years of excavation yielded more than 11.000 vertebrate and mollusc specimens, proving not only aquatic and terrestrial taxa but also a few human individuals. Ashy filling layers out of the voluminous ditch that characterized excavation Area C produced more than 3000 mammalian remains, determined at least to the family or genus, but only a few avian, ichthyan and reptilian bones. Area B contained only 260 identifiable bones, almost exclusively mammalian remains. Mollusc shells and fish bones were widely restricted to sample C.

Analysis revealed significant differences between the two samples. While the mammalian bones from Area C express balanced ratios of cattle, caprines and pigs, bovine remains dominate the assemblage from Area B. Red deer was identified in both samples at shares of 3%, occasional finds from sample C proved also roe deer, wild boar, bear, wolf, badger, wild cat and even golden eagle. Other than in sample B, almost a fifth of the specimens from sample C were burnt and, also different from sample B, a rather high percentage of the dog bones from sample C showed butchering marks. Therefore, due to significant peculiarities of the two assemblages, different economic backgrounds of producing garbage as well as different modalities of deposition might be discussed.

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“Turn and Face the Strain”:

Continuity and Change on Kos during the Mycenaean Palatial and Early Postpalatial Periods

The aim of this paper is to analyze the socio-political role of Kos in the wider context of the Eastern Mediterranean during the second part of the Palatial period and the early stages of the Postpalatial period of Mycenaean civilization (circa 1300 to 1150 B.C.). In order to do so, elements of continuity and change from Late Helladic (LH) IIIB throughout LH IIIC Early are examined with reference to the following main features: (a) Settlement patterns and distribution; (b) Cemeteries and tomb typology; and (c) Quantity and quality of significant finds, such as ceramics, weapons, and jewellery.

The study proposed here derives from the results of the “Serraglio, Eleona, and Langada Archaeological Project” (SELAP), a research endeavor carried out since 2009 under the auspices of the Italian School of Archaeology at Athens. The analysis of the evidence indicates that LH IIIB was a phase of wealth and expansion on Kos. This conclusion is suggested by four elements: (a) The presence of numerous settlements

and cemeteries; (b) The demographic increase in the area of the “Serraglio”; (c) The occurrence of a tholos tomb at Thalassinos; and (d) The existence of a Cyclopean-type wall at Palaiopyli, probably implying a Mycenaean fortified citadel situated roughly in the center of the island. It is likely that the importance of Kos during LH IIIB may have grown at the expense of Rhodes, where Ialysos underwent a period of apparent decline. This fact suggests that, during the 13th century B.C., Kos may have had a prominent political role in the southeast Aegean as well as in the so-called Ahhiyawa Kingdom.

The LH IIIB to LH IIIC transition on Kos was typified by three potential signs of social uncertainty and upheaval. At the cemeteries of Eleona and Langada, during LH IIIB2 Late wealth and status were expressed mainly through an emphasis in the display of weapons, including types of possible Italian origin, such as the Naue II sword and the short socket spearhead. At the very end of the same phase, the settlement of the “Serraglio” was affected by a fire destruction event. Slightly later, during LH IIIC Early, men bearing some of the typical features characterizing the Sea Peoples, such as feathered helmets, were represented on at least four locally produced kraters from the “Serraglio”. These data suggest that Kos may have been involved in the major crisis that affected the Mycenaean world and, more generally, the Eastern Mediterranean at the turn between the 13th and the 12th centuries B.C.

During LH IIIC Early, the number of sites attested on Kos decreased from the previous period, suggesting that the local population may have abandoned minor settlements and concentrated at the “Serraglio”. The tholos at Thalassinos was no longer utilized and there is no positive evidence for the continued occupation of the fortified site at Palaiopyli. Other than these potential signs of impoverishment, however, no major elements of discontinuity are present in the material culture record. In fact, during LH IIIC Early, at least two elements testify to a certain degree of wealth and vivacity in the Koan community: (a) An increase in the quantity and quality of the jewellery offered to the dead at Eleona and Langada; and (b) An expansion in the diversity of ceramic imports, which implies a more fluid pattern of contacts as compared to LH IIIB. These features indicate that, after the destruction affecting the “Serraglio” towards the end of the 13th century B.C., the Koan inhabitants were able to face the crisis and to profit from the new opportunities created by the collapse of the Mycenaean Palatial system. This prompt reaction may have been one of the key factors that led the island to play a major role in the flourishing of the so-called East Aegean Koine during the successive Middle phase of LH IIIC.

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