

Abstracts

Emiliano Arena

“Sigle demotiche” e Synkletos nella Kale akte tardoellenistica.

The epigraphic document SEG liX. 1102, inscribed on a marble slab found in 2003 in an uncultivated ground on the slopes of the hill of modern Caronia (Sicily), can probably be attributed to the ancient *Kale Akte (Calacte)*, founded in 446 B.C. by the Sikel dynast Ducetius. upon the paleographical evidence the inscription is likely to date back between the end of the iii and the middle of the ii century B.C., and preserves a fragmentary honorary decree for an unknown person. the document offers new issues of historical interest for the study of the late Hellenistic siceliote institutions: it records, in fact, a new evidence of the enigmatic community acronyms (“demotics”), which are also recorded in other Hellenistic Siceliote *poleis*; moreover, the inscription probably testifies to a rare kind of three-chamber institutional system, which, until now, finds epigraphical comparisons, in the late Hellenistic period, only at Akragas and rhegion: in addition to the *halia* (assembly) and *boula* (council), peculiar of the Siceliote politeiai, in the deliberative mechanism a synkletos appears, i.e. a “restricted” government body of controversial institutional nature, identified by scholars either with an assembly or with a council. in the Calactine context, the nature and the origin of the *synkletos* appear even more problematic, due to the almost total silence of the historical sources on the fate of the city between the years of Ducetius’ foundation and the Second Punic War. An introduction of this third institutional body in the age of the romanization of Sicily being unlikely, the possible context of origin will be likely identified in *Kale Akte* foundation period or more probably in the time of the Timoleon’s reforms of Sicily in the 30s of the fourth century B.C.

Fabia Aversa

L’elmo del tarantino ΑΡΙΣΤΙΑΣ.

The Antikensammlung der Staatlichen Museen in berlin houses a helmet carrying the engraved inscription ΑΡΙΣΤΙΑΣΤΑΡΑΝΤΙΝΟΣ. This paper argues that the analysis of the inscription could give precious insights on certain neglected aspects of Tarentine History. The distance between the dating of the engraving (first half of the 5th century BC) and that of the manufacturing of the helmet (second half of the 7th century BC), could be explained by the strong symbolic value of arms in Ancient Greece, whereas the ethnic label suggests that the owner of the helmet, maybe an outcast or a mercenary from Taranto, was away from his *Polis*.

Vito Bruno

Su alcuni aspetti della theorodokia nella “Grande lista di Delfi”.

The paper analyzes one of the problems related to the operative modalities of the *theorodokia*. By examining two of the sections engraved on the “Great List of Delphi”, it is shown that the lists of *theorodokoi* constitute reliable epigraphic instruments, in all their parts, for the knowledge of the ancient itineraries recorded on their writing surface. the topographical inconsistencies found, in some parts of the “Great Stele”, in the succession of the locations reported have allowed some scholars to question the reliability of the geographical value of the lists. to overcome these contradictions, we advance the hypothesis according to which the delegations of Delphi’s *theoroi* were able to separate

themselves into different groups, who would have visited the places along a part of the route following, in an autonomous way, a different path.

Ivan Ferrari

Le terme romane di Malvindi: dall'analisi architettonica all'elaborazione di una proposta ricostruttiva.

The paper presents the results of the studies carried out on the Roman baths of Malvindi in the Mesagne (Br) countryside, a site only partially investigated but that offers interesting historical, topographic and constructive data for its exceptional state of conservation. The first information on the presence of the structure dates back to the late 19th century, but the first archaeological investigations were carried out in the second half of the 80s by the Archaeological Superintendence of Puglia. A *frigidarium* with its small pool and two hot rooms, a *tepidarium* and a *sudatorium*, were brought to light and freed from the fragments of the vaults. The technical analysis of the structures, together with the archaeological finds documented during the excavations, shows the presence of different phases of use and the elaboration of a reconstructive proposal aims to highlight the changes with their relative internal paths. The study also aims to arise new attention on a neglected site, to stimulate the planning of urgent restoration and excavation interventions in the remaining portions of the complex, and to have new data both for a better understanding of the architectural development of the Roman bath, and for a more precise definition of the role played in the context of a territory rich of archaeological evidence.

Vito Giannico

La fattoria messapica di Acquarica Pozzo Seccato (Lecce).

Recent archaeological excavations at the Hellenistic farm of Acquarica Pozzo Seccato (LE) allowed to identify a frequentation of the site during the early imperial age. In this period the agricultural exploitation of the neighboring area appears to be linked to an isolated building, probably a tower, built in the Hellenistic age and equipped with fireplaces. In addition to domestic functions, as it shown by pottery and other artefacts, the tower was used as an element of the farm's defensive system and probably as an observation point to control the territory.

Claudio Giardino

La bauxite: una risorsa di ferro per la Puglia protostorica e tardo antica.

The possibility to smelt iron from local ore deposits has played an important role in the economic strategies of ancient societies; therefore, communities actively searched for all available resources in the region. In Apulia there are many archaeological proofs connected with activities related to iron working; the region has its own iron ores, bauxite.

In 1909, at Coppa Nevigata heaps of slag were found in an excavation of Late Bronze Age layers; these slags are presently lost. The description provided by Mosso suggests that they were related to iron smelting.

The analyzes carried out at that time provided this result: SiO₂ 45.35%, Fe₂O₃ 7.95%, 20.25% Al₂O₃. This composition is similar to the composition of smelting slag from Swiss bauxites; it should be pointed out that Coppa Nevigata is located near bauxite outcrops.

Recently small slag fragments from the Mosso's excavation were found in the Naples Museum; they were associated with a piece of yellow calcite. Metallographic analyses carried out on the slag showed the presence of fayalite crystals dispersed in a glassy matrix, clue of metallurgical processes. They were not the slag described by Mosso, but silicate-iron residues produced by the

heat in the inner parts of a furnace or a forge; the fayalite crystals and the lack of copper traces suggests that the structure was related to iron metallurgy.

In the 12th-10th century BC iron artefacts were found in Croatia and Albania; Adriatic connections are testified by two spearheads belonging to the Albanian type "Pazhok" recovered at Coppa Nevigata. Moreover, a forge with iron smithing slag was excavated at Broglio di Trebisacce (Cosenza) in Final Bronze Age layers.

Since the Early Iron Age, many iron artefacts have been found in Apulian tombs, at Torre Saraceno, Arpi, Masseria Cupola and Ortona.

Iron smithing slag comes from the Early Iron Age settlement of Otranto (Cantiere 3) together with other evidence of metallurgical activity.

During historic times, evidence of iron metallurgy is substantially connected to smithing in Apulia. Possible, faint clues of bauxite smelting were found in the center of Lecce datable to the Messapic phase. Working metal traces come from Piazzetta Epulione dating back to the 4th – 3rd century BC: whetstone remains, and a tuyère fragment were found together with a bauxite pisoid. The analysis (XRD and metallographic optical microscope) demonstrates that this pisoid is comparable to the pisolitic rocks of the region.

The clearest evidence of ancient exploitation of Apulian bauxites was observed at Salice Salentino (Lecce), where smelting slag was found associated with pottery and bauxite fragments in a site dating back between the Roman Empire and the Byzantine period.

This evidence sheds new light on the provenance of the iron used in Byzantine and Medieval Salento: many signs of iron working were found in the Lecce Province that can be dated to these times.

Iron smelting of non-traditional iron ores, like bauxite and laterite, could have a relevant part in the economy of regions - such as Apulia - where only these deposits are available.

Laterite and bauxite are iron-aluminum ores very similar in their geological formation, as they are the outcome of the same chemical and physical phenomena. Bauxite is a rock whose color ranges from red-brown to yellow; it is composed of a colloidal mixture of varying amounts of hydroxides of iron and aluminum (the quantity of aluminum varies between 30 and 75%), with the presence of clay and siliceous impurities.

In Apulia, bauxite is inside the Cretaceous limestones, especially at Poggiardo (Lecce), at Spinazzola in Murge and at San Giovanni Rotondo in Gargano; generally, the deposits are pisolitic, or pealike. The mineralization of Salento is located southeast of Lecce and it consists of masses of rust-colored soil (*terra rossa*, red soil), containing many spherical nodules of different sizes. Nodules and pisolites are composed of aluminum and iron hydroxides.

The exploitation of Apulian bauxite deposits to produce aluminum dates back to the end of the 1930s, but the presence of metallic pisolites was already mentioned by Girolamo Marciano of Leverano in the 17th century. Even in the mid-nineteenth century, the bauxite was considered to be a raw material for both, aluminum and iron: bauxite supplied the iron industry in the Kingdom of Naples.

Examples of ancient exploitation of bauxite ore as an iron ore are recorded from western Switzerland, where these deposits were exploited since the Celtic period. At Bellaires I (Canton of Vaud) a smelting furnace was radiocarbon dated to 350 ± 80 BC. Iron ore consists of laterite-bauxite minerals (*Sidérolitique*) of sedimentary origin, with pisolites and oolites in a clay matrix. As in Switzerland, there is evidence of proto-historic exploitation of bauxite ores in southeastern France, in Haute-Savoie, and in southwest Germany, in Baden-Württemberg.

In sub-Saharan Africa laterite ores - bauxite-like rocks that are formed in tropical regions - have been exploited by local people for iron production, as in Malawi in the Nyika plateau and in the Kasungu district, among the Dogon in Mali, and in Nigeria at Oyo.

At Kasungu the ore was laterite with low iron content (20-30% Fe); the pisolites were placed in a CO / CO₂ environment, to a temperature above 800 °C: the ore was reduced, in succession, first to hematite - magnetite, then to wüstite and finally to iron.

Part of the iron oxide produced a fayalite slag during the smelting process; the processing temperature was around 1200 °C, much lower than the iron melting temperature that is 1538 °C.

According to old ethnographic reports, a high quality iron was obtained from laterite ores smelted with furnaces similar to the protohistoric European ones.

Many different types of iron objects were produced, even if the amount of iron required was modest and could be satisfied by a seasonal production.

Smelting experiments were performed with bauxite ore from Salento in order to test the possibility of extracting iron from the Apulian bauxite using techniques compatible with the ancient knowledge; after that the resulting slag was analyzed. During the test, 36 kg of pisolitic bauxite ore coming from Poggiardo (Lecce) was used; a low content of iron oxides characterizes this ore. A 100 cm high smelting furnace was used and two bellows furnished the air blast.

The bauxite ore was preliminary roasted. The smelting process lasted 8 hours from the first introduction of the ore into the furnace. Only a modest bloom was obtained, because of the small amount of ore used and its low iron content. Some non-reduced bauxite nodules remained inside the furnace.

The experiment confirmed that it was possible to use Apulian bauxite ore for iron smelting.

The evidence of Apulian bauxite smelting seems to be chronologically related to two periods: during the late prehistory and in the late antiquity - early middle ages, when the economy was mainly based on local exchanges.

Emanuele Greco

Precisazioni sull'edificio quadrato del Santuario di Hera al Guado del Sele.

In this paper I propose a different interpretation of the votive context excavated by Paola Zancani Montuoro in 1958 in the sanctuary of Hera at the ford of Silarus River. We are dealing about the famous building known as 'square building', inside which P. Zancani recovered a great deal of objects, including, among different other offers, many loom-weights. In my opinion, there is a connection with Hera's cloth, but with the role of the Roman-Italic *matrona*, as we may infer thanks to hundreds of Lucanian painted tombs contemporary to the 'square building'.

Katia Mannino

Musica divina e legami terreni. Una placchetta con Apollo e Marsia da Palazzo Vernazza (Lecce).

This paper focuses on a renaissance bronze plaquette depicting the myth of Apollo and Marsyas discovered in 2011 in the old town of Lecce during archaeological research conducted in Palazzo Castromediano Vernazza, a residence built for a noble family in the 16th century. The plaquette faithfully reproduces a masterpiece of ancient art: the famous Roman intaglio known as the 'The Seal of Nero', which was held by the Medici family in the 15th century and is kept today in the Farnese collection of the National Archaeological Museum in Naples. The paper first considers the Roman gem used as a model: the stylistic and iconographic characteristics of the intaglio are described and its movements as a result of its various changes of ownership, from Florence to Rome and Venice, are traced. The main themes concerning the production of antiquarian plaquettes are then analysed in order to identify any elements that might serve to establish the historical and artistic background of the plaquette from Lecce. Other aspects of the research concern the interpretation of the mythical scene of Apollo and Marsyas from the Roman period to the Renaissance and the significance that this small but fine plaquette might have had for its noble owners in Lecce in the 16th century.

Francesco Meo

Contesti, strumenti e produzioni tessili in Italia Meridionale tra l'età del ferro e l'età repubblicana.

The paper focuses on some case studies in order to have a first general picture of textile production in southern Italy through the analysis of textile instruments and fragment of textiles from some 8th-

2nd century BC archaeological contexts. They are Incoronata necropoleis, a late-Archaic house of Kaulonia, the necropolis of Ripacandida, the square building in the Sanctuary of Hera near the mouth of the river Sele of Poseidonia-Paestum and a burial of the same town, some tombs from the Messapian contexts of Muro Leccese and Vaste, Taranto, several houses of Eraclea and some 3rd-2nd century BC farms of the *chorai* of Eraclea and Metaponto. All the instruments have been systematically analysed and the methods of investigation based on the research conducted at the Centre for Textile Research in Copenhagen have been applied to study these implements. Results about loom weights are particularly interesting because can be compared with the fragments.

Claudia Minniti

Ricerche archeozoologiche a Vaste (Le), Fondo Melliche: analisi dei resti animali provenienti da uno scarico votivo (VME 06 US 243).

In this paper the animal remains from the VME 06 US 243 feature, found at Vaste, Fondo Melliche, are discussed in view of the ritual role of their deposition. The feature consists of a pit filled by a huge quantity of animal remains found together with other votive material dated to the 4th- 3rd century BC and is pertaining to the Messapian town of Vaste. It is located close to a complex made by an enclosure with square block walls, a cistern and several holes, possibly devoted to the cult of fertility and chthonic deities. The animal remains mainly belonged to sheep; very few remains were of pigs and cattle. Ovine remains belonged to seventy-eight adult individuals. Of particular interest are the burnings that characterize the same part of several bones. It is likely that the extremities of bones were exposed to fire after the disarticulation of skeletons during cooking.

Giuseppe Scardozzi

Contributo alla ricostruzione della topografia antica dell'area di Pozzo Seccato (Acquarica di Lecce) tra l'età del bronzo e l'epoca medievale.

Starting from the study of already known archaeological evidence, the paper focused on the reconstruction of the ancient topography of the territory where at the end of the 4th century BC was built the fortified settlement of Pozzo Seccato (close to Acquarica of Lecce), identified with a Messapic farmhouse completely surrounded by a large defensive dry-stone wall with an outside curtain in large squared limestone blocks. The settlement, which was partially occupied until the second half of the 1st century AD, was located along an important route, dating back to the Protohistoric times, which linked the area of Lecce, Rudiae and Cavallino, to the Adriatic coast more south-east, dominated by the settlement of Roca from the Middle Bronze age. The study, based also on a systematic analysis of ancient cartography and old aerial photos collected before recent transformations of the territory due to anthropic pressure and agricultural works, which have destroyed some ancient remains, has a diachronic perspective, from the Eneolithic age, when dating back the first occupation of the area, to the late Medieval period. Particularly important was, during the protohistoric period, the settlement of Lafranica, located about 850 m north-west of the Hellenistic fortified farmhouse and characterized by a necropolis with some funerary tumuli (*specchie*) dated between the Ancient and the Middle Bronze age. After the abandonment of the Hellenistic and early-Imperial settlement of Pozzo Seccato, which controlled the mentioned road and had a clear agricultural vocation, the area was included in the countryside south-east the Roman city of Lupiae.

Grazia Semeraro, Branko Kirigin

Black-figured vases from Palagruža.

The paper deals with the Black-figured Attic vases found during the excavation carried out in the small island of Palagruža (Croatia). These materials are supposed to be offerings deposited in the

shrine of the hero Diomedes. Some general information about findspots and stratigraphy are given, then some observations on chronology, painters/workshops, scenes/subjects, distribution of BF on the Adriatic, and at the end the catalogue of the recovered sherds.

The BF pottery group consists of approximately 130 fragments mainly related to open shapes of small dimensions, such as cup-*skyphoi* and cups.

The materials are datable in the final phases of the sixth century B.C. and especially at the beginning of the fifth century B.C.

The better datable or stylistically attributable fragments mainly refer to the most popular products in the Mediterranean during the late sixth or the early fifth century B.C. (Leafless Group, Haimon and Lancut Group, CHC Group).

The distribution of Attic imports in the Adriatic area is analyzed in order to highlight the role played by Palagruža, and its contribution to the reconstruction of the archaic trade.

Luigi Taborelli

I «medicinal vessels»: un mondo ancora da esplorare.

The publication of the small group of “medicine vessels” from ancient *Athribis* (Lower Egypt), offers the opportunity to formulate some thoughts about the use of these micro-containers, only two of which were stamped prior to firing and, therefore, were destined to contain the medicament *Lykion*. Furthermore, the question of form typology is returned to, a subject still requiring further definition due to the limited number of known examples. Some epigraphic aspects of the stamps are discussed, in particular the names of the pharmacists who produced the medicament and the formulae that mention them. Several points deriving from the systematic survey of the work in question follow. Lastly, a “documental appendix” comprising four tables is provided, which integrate and update the documentation thus facilitating the understanding of the problems connected with form typology.