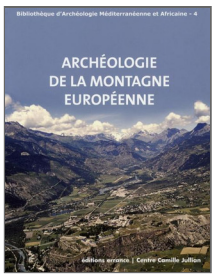

Stéfan Tzortzis et Xavier Delestre (dir.)

Archéologie de la montagne européenne
Actes de la table ronde internationale de Gap, 29 septembre-1er octobre 2008

Publications du Centre Camille Jullian

Prehistoric settlement and population in the Madonie mountains: new data from the archaeological survey

Occupation et population préhistoriques dans les montagnes de Madonie : nouvelles données archéologiques

Oscar Belvedere and Vincenza Forgia

DOI: 10.4000/books.pccj.333
Publisher: Publications du Centre Camille Jullian, Éditions Errance
Place of publication: Aix-en-Provence
Year of publication: 2010
Published on OpenEdition Books: 13 February 2020
Serie: Bibliothèque d'archéologie méditerranéenne et africaine
Electronic ISBN: 9782957155736

OpenEdition books

http://books.openedition.org

Printed version
Date of publication: 1 June 2010

Electronic reference
BELVEDERE, Oscar ; FORGIA, Vincenza. *Prehistoric settlement and population in the Madonie mountains: new data from the archaeological survey* In: *Archéologie de la montagne européenne: Actes de la table ronde internationale de Gap, 29 septembre-1er octobre 2008* [online]. Aix-en-Provence: Publications du Centre Camille Jullian, 2010 (generated 03 avril 2020). Available on the Internet: <http://books.openedition.org/pccj/333>. ISBN: 9782957155736. DOI: https://doi.org/10.4000/books.pccj.333.

View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by OpenEdition

Prehistoric settlement and population in the Madonie mountains: new data from the archaeological survey

Oscar BELVEDERE*, Vincenza FORGIA*

Abstract. The aim of the Madonie research project is to analyse mobility strategies and the use of a mountainous territory by relating geomorphologic features, raw material sources and landscape to the prehistoric settlement. For this purpose we planned an intensive and systematic survey of sample areas, selected on geo-morphological, altimetric and archaeological criteria, correlated to a palaeoenvironmental investigation based on the study of palynological sequence samples coming from wet areas of the Madonie territory and from archaeological deposits.

Occupation et population préhistoriques dans les montagnes de Madonie : nouvelles données archéologiques
Résumé. Le projet de recherche sur la Madonie analyse les stratégies de mobilité et l'exploitation du territoire de montagne, en reliant les caractéristiques géomorphologiques, les sources de matières premières et le paysage aux modes d'occupation préhistoriques. Pour ce faire, nous avons mis en œuvre l'étude systématique de certains secteurs sélectionnés suivant des critères géomorphologiques, altimétriques et archéologiques, en parallèle à une recherche paléoenvironnementale fondée sur l'analyse d'échantillons palynologiques en provenance de zones humides et de sites archéologiques du territoire de la Madonie.

In 1928, R. Vaufrey discovered and excavated several Upper Palaeolithic deposits founded into caves, along the Northern coastline of Sicily (Vaufrey 1928). After the publication of the results of his investigations, further archaeological researches were focused upon sites into caves instead to be devoted to archaeological surveys and the identification of open-air sites. Therefore, a misunderstanding occurred: it was emphasised by the students a settlement strategy by prehistoric people based on the almost exclusive use of natural caves. Besides, there was no knowledge of territory exploitation and of a probable seasonality between the coastal sites and the mountainous ones, especially for the period of the first (surely documented) "colonization" of the island, during the late Upper Palaeolithic (Epigravettian). Our study would like to analyze the territorial organization during prehistoric periods, considering also high altitudes areas, which surely played a key role in some specific economic systems (that of Upper Palaeolithic hunters-gatherers societies, for example).

1. Aim of the project and methodological approach

Our project is the next stage of a larger research project which investigated the hinterland of the Greek colony of Himera, carried out since the '80 as a systematic and intensive survey of the territory of three main rivers valleys, Imera, Torto and San Leonardo valleys, with a chronological range from prehistory until the medieval period. The results have been published in two volumes (Belvedere *et al*. 1988; 2002) which inform us about the archaeological landscapes, the human land use history and exploitation of the natural resources, in relation to palaeoenvironmental data.
Survey interested more than 120 sq. km, including (starting from the South):
- The high Southern Imera (Salso) and Platani rivers basin;
- The southern upper hilly watershed zone;
- The Eastern coastline area, between the Northern Imera River and the Roccella Stream.

* Università di Palermo, Dipartimento di Beni Culturali, Viale delle Scienze, Palermo (Italie).
The project was designed by O. Belvedere and V. Forgia together. O. Belvedere is responsible for the methodological approach; V. Forgia conducted the work on the field, collected the data and wrote this report.

About 400 new archaeological points of interest (sites, potsherd scatter areas, sporadics, tombs, and so on…) have been detected and positioned with high precision using the regional topographic map at the scale of 1:10000 (CTR). All the data are stored in a GIS, now to some extent available to the students as web-Gis.
The last stage of the Himera project is the study of the Madonie Mountains bordering the Eastern part of its territory. Even if we don't forget the long chronological range and recorded the protohistoric, classical and medieval archaeological sites and scatters, the main aim of the Madonie research project is to analyse mobility strategies and the use of a mountain territory by prehistoric people, by relating geomorphologic features, raw material sources and landscape to human behaviour and prehistoric settlement.
To that end we planned an archaeological survey and a palaeoenvironmental investigation based on the study of palynological sequence samples, coming from wet areas of the Madonie territory and from different archaeological test pits.
Our research started out with the investigation of four sample areas chosen with altimetric and geomorphologic criteria. In a second time we planned some targeted inspections, so we focused on the investigation of main river terraces slopes, rock-shelters and caves.

2. Geo-topographic context

Madonie Natural Park lies on the northern coast of Sicily, near Palermo, in the surrounding of the Greek colony of Himera (fig. 1).
The Madonie system is the second of Sicily in terms of altitude and extent. The highest peaks are over 1900 m above sea level (Pizzo Carbonara 1979 m, Monte Ferro 1907 m).
The Madonie Mountains are bordered by three main rivers: Northern Imera on the West, Pollina on the East, while Southern Imera starts from the South. The northern border is marked by the Mediterranean (Tirreno) Sea.

3. Archaeological data coming from the systematic survey

In the Uplands our interest has been focused on two areas: the first one is marked by the presence of chert sources, while the second one is characterised by a karstic geomorphology, with many dolines, dry valleys, polje, sinkholes and caves. Both areas are located between 1400 and 1900 m of altitude.
The Lowlands are also marked by karstic phenomena which are responsible for the presence of several natural caves frequented during the prehistoric periods (mainly during the Copper Age). Our research testifies for the first time the presence of open-air settlement and prehistoric human activity out of the caves.
The lowest area, looking at the Greek colony of Himera, presents a hilly or flat landscape with different Classic and Late Roman potsherd scatters.

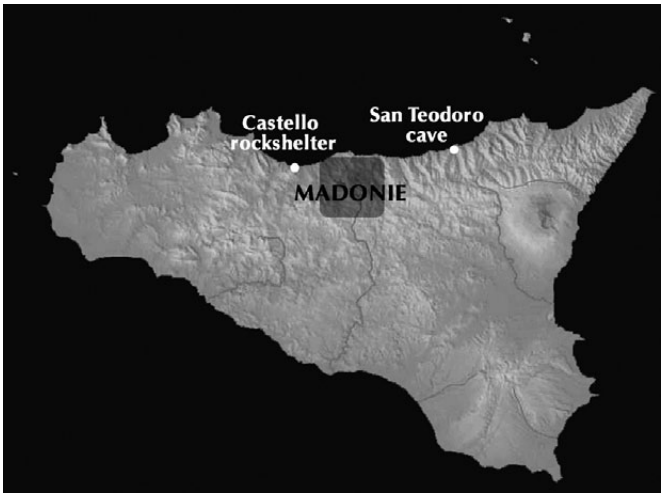

Fig. 1. Localization of the Madonie mountains system.

3.1. Upland sample area – I

In the first high altitude area, between 1400 and 1800 m above the sea level, the systematic survey lets us recognize a lot of lithic scatters mainly localized along valleys (karstic dry valleys), on the few plane zones (also of karstic origin) and in association with rock-shelters. One of this areas, characterized for the presence of natural flint nodules, revealed different Topographic Units (sites) constituted mainly by flint cores and unretouched flakes.

3.2. Upland sample area – II

On the other hand, the second area, with a different geological substratum showing the presence of quartz-arenitic rocks, lets us identify a significant open-air site where we were able to collect typical Upper Palaeolithic implements as quartzite blades and bladelets.

3.3. *Battaglietta* site

Karstic area reveals the presence of different Upper Palaeolithic stations. The Topographic Unit 24, a possible débitage area where laminar blanks were produced, is located in the middle of one of the main polje of the Madonie complex at the altitude of 1600 m above the sea level, close to the Battaglietta sinkhole (fig. 2).

Finds are represented by unretouched and retouched blades, made up of quartz-arenite. Blanks are generally long (between 8 and 12 cm) (fig. 3).
A small number of flint tools were also found. We suppose that the place is a lithic workshop mainly because of the presence in-situ of the raw material constituted by quartz-arenitic rocks included in an isolated bed of Numidian Flysch (while the area is characterised by carbonates of the Panormide Unit). The place was probably exploited during the final period of Upper Palaeolithic, when more favourable climate conditions should have allowed hunters-gatherers groups to reach highest altitudes. New inspections of the area revealed also the presence of microlithic blanks, which could testify a frequentation of the site during Mesolithic.
Investigation of the Battaglietta site could represent a good opportunity to solve open questions about the local transition to Holocene and about seasonality between coastal and mountainous areas. A first analysis detected that the reduction sequences of quartz-arenitic implements are akin to those observed in the Upper Palaeolithic complexes coming from coastal cave sites, as Grotta Natale (Sebasti 1998, p. 27-28), Castello rock-shelter (Gabrici 1930, tav. 1; Zampetti 1987) and Grotta San Teodoro (Vigliardi 1968), with respect to the final phase of local Epigravettian (upper level of San Teodoro deposit, without geometrics - Palma di Cesnola 1993).
The Madonie Mountains lie just in front of the Castello rock-shelter and their core is about 60 km far from this coastal Epigravettian site (fig. 1); the systematic survey of mountainous areas lets us suggest the presence of a complex use of Sicilian territory by Upper Palaeolithic hunter-gatherers groups, involving likely seasonal displacements, whose ways have to be analysed by the ongoing research (intensified field survey and planned excavations).
The presence in a site at high altitude (1740 m above sea level) of obsidian tools with some other flint implements indicates the use of the uplands during more recent periods, like Neolithic or Copper Age.

3.4. Middle altitude sample area

The archaeological survey in the middle area, the valley of Isnello (between 700 and 1100 m above the sea level), already known in literature for the presence of Copper Age tombs into natural caves (Fico, Chiusilla and Vento caves), allowed us to recognize some lithic and potsherds scatters, that actually confirm the use and occupation of open-air sites besides the use of the caves. Most of the caves of this area show modern and ancient pastoral use, which it is possible to recognize by the presence of spherulites, layers of burnt manure and rock polish (Brochier *et al*. 1992). We suppose that the interest of prehistoric people for this close valley was linked to pastoral practice and to the possibility to walk up to higher places, where today we can observe abandoned or still in use stock pens and *pagliari* (we remind the case of few obsidian implements founded close to one of these modern pens at an altitude of 1700 m above the sea level, that could give evidence of a later use of the same places for pastoral activities).
Recently discovered open air-sites are located over small plane surfaces surrounded by (or predominant over) a hilly district. Common pottery, associated to lithic tools, testify the occupation and the use of this narrow valley area, which looks quite different from the Imera river valley (as we shall see further), where we are recording evidences of human presence since Middle Neolithic and where there are signs also of another kind of cultural approach, more open and dynamic, during the following Copper and Bronze Ages.

3.5. Lowland sample area

In the lowest area situated between the western slopes of the Madonie Mountains and the Imera River, we recorded many sites of classic and Late Roman age (this area looks at the ancient Greek town of Himera). In this area we can also find the significant Vallone Inferno rock-shelter deposit -where we collected samples for palaeoenvironmental investigation- which links directly this lower area to the top of the Madonie mountains.

4. Inspections focused on specific questions

The investigation of single places of interest (river terraces slopes, caves and sinkholes), outside from the sample areas, provided other data attesting that the human interest for the low and middle altitude areas of Madonie mountains has to be linked at least to the Middle Neolithic (Late Neolithic human presence was already testify by Diana pottery coming from Vecchiuzzo cave, in the Southern Madonie), as attested by the presence of Middle Neolithic painted pottery into a cave (Bommartino cave) and in a rock-shelter (Vallone Inferno).

4.1. Early human presence in Sicily in the contest of European early peopling

Investigations particularly looked at:
• Exploration of section and slopes of marine and river terraces
• New caves recording
• Exploration of karstic sinkholes in order to verify the presence of ancient deposits.
This second step of the research was developed in order to clarify basic questions about early human presence

Fig. 2. Detail of Battaglietta sinkhole (Photo: A. Ollè).

in Sicily, which is strictly linked to the first peopling of Europe (Carbonell, Rodríguez 2006; Peretto 2006; Mishra *et al*. 2007, p. 3005; De Lumley *et al*. 2009).
An important issue in relation to the early phases of human displacement from Africa ("out-of-Africa" I) concerns the possibility of migrations across the central Mediterranean Sea from Tunisia into Sicily and Southern Italy. Considering that "river terraces are well established as an important source of Lower and Middle Palaeolithic artefacts in Europe" (Mishra *et al*. 2007) and that main Early Palaeolithic European sites have been individuated into deep sinkholes (Atapuerca karst system), the research included an accurate control of river terraces and local sinkholes in order to find some evidence of pre-*Homo sapiens* people. At present we recorded some lithic assemblage of undefined chronology and an isolated faunal remain of an extinct dwarf elephant (Forgia 2008).

4.2. Giancaniglia (Early Palaeolithic site?)

The last discovery is linked to an old information (Meli 1961) about the presence of quartzite flakes ("une sorte de Clacto-Levalloisien…" - Graziosi 1968) in the same river terrace section, that, if the reciprocal association will be confirmed by further investigations, could give a first contribute to the understanding of early peopling of the island.

4.3. Caves and rockshelters of Madonie territory

More then 20 caves have been recorded by survey. Most of the caves present important deposits which could reveal an archaeological interest.

4.3.1. Vallone Canna caves system

Vallone Canna is a natural canyon characterized by the presence of many horizontal caves opened into its sides. Three of these caves have been explored in order to detect an eventual ancient deposit. The first one, starting from the East, is interested by the stream of Canna River, which cut its deposit, characterized by horizontal and sub-horizontal layers. Inside the section it was possible to identify some faunal remains but no evidence of anthropic presence.
The other two caves, both opening on the left side of the river, show a deep deposit (as it looks like by the natural shape of karstic caves), interested by presence of modern pottery, which testify the use of the caves in modern time and could hide an earlier and really probable frequentation.
Not far from the river and caves system there is a shepherd

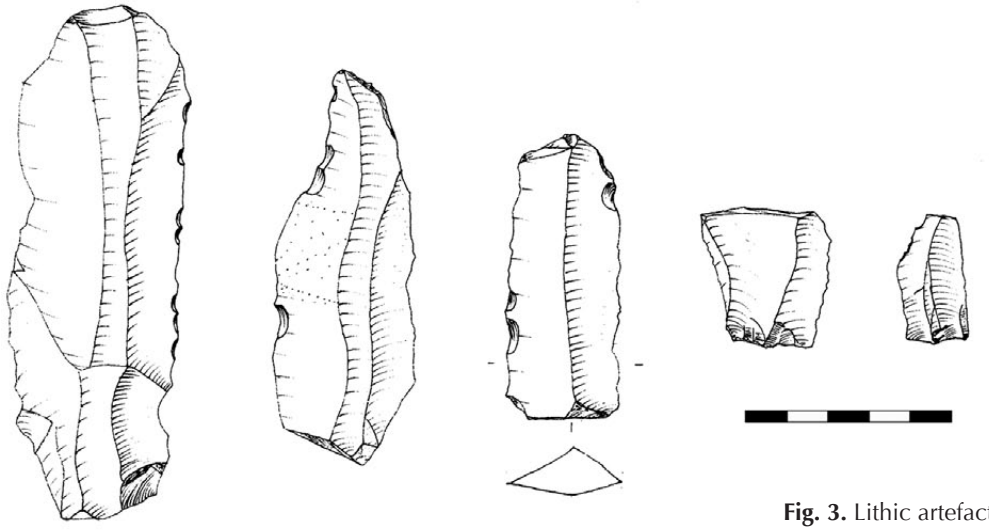

Fig. 3. Lithic artefacts from Battaglietta (UT 24).

modern site (Case Sambuchi). Further researches could link the modern use of this place with the potential archaeological and palaeoenvironmental record here preserved.

4.3.2. Vallone Inferno rock-shelter

In 2008 University of Palermo, in cooperation with Institut Català de Paleoecologia Humana i Evolució Social -Universitat Rovira i Virgili, Tarragona- started out an investigation of the Vallone Inferno prehistoric rock-shelter, located in the latest survey season. First preliminary data will be given in a further communication. The main aim of the investigation is to collect new information about palaeoenvironmental holocenic changes of the area and to obtain new radiocarbon dates of all the phases of occupation in this multi-stratified deposit.

4.3.3. **Bommartino** *cave (Middle Neolithic – Early Bronze age site)*

The cave is located in the territory of Sclafani Bagni, on the western side of the Imera River. Local farmers call the place with the name of Bommartino, so we gave to the cave the same name.
The cave is formed by a rock-shelter, an open chamber and an underground cavity.
The rock-shelter is interested by the presence of prehistoric potsherds of undefined chronology; the open chamber has no deposit (the rock bottom appears); the underground cavity, which presents a deposit with an important inclination (about 35°), is rich of prehistoric pottery and lithic industry scattered on the surface. A lateral recess seems to be used as burial place (human bones and one probable cinerary pot were found), but only future investigation could clarify the functions of the inner chamber during several phases of prehistory (fig. 4).
The human presence inside the cave, is attested, up to now, since the Middle Neolithic, by the typical painted pottery (called *tricromica*), which we also found on the opposite side of the valley, at Vallone Inferno rock-shelter (at the same altitude). Other prehistoric periods are represented by Copper and early Bronze Age pottery. The presence of *Castelluccio* pottery (early Bronze Age), almost unknown in this part of Sicily, has to be explained. It could represent an isolated introduction of some items or implies the interest of *Castelluccio* groups for this specific territory, maybe linked to the thermal activity and the sulphurous water source of Sclafani.

Fig. 4. Prehistoric pot from Bommartino cave.

5. Preliminary palaeoenvironmental data

During last years scientific community has looked with a renovate interest to palaeoenvironmental topics of Sicily. Some pilot researches have been carried out in order to define different aspects of the Quaternary environment (Belvedere *et al*. 2002) with a special focus about Pleistocene-Holocene transition (Frisia *et al*. 2006; Sadori 2001; 2007a, b).
A work in progress in the hinterland of the Greek town of Himera is sampling different ancient lacustrine deposits situated in the Southern part of the *Imerese* territory, between the hills and the Madonie Mountains.
The research of the University of Palermo, in cooperation with the Free University of Amsterdam[1], is giving first preliminary results. Some interesting data come from a core (C7) from Gorgo di Pollicino Lake, located at the altitude of 1300 m a.s.l., in Petralia Sottana territory.
Pollen is common through the cores and the variety of pollen-assemblage shows that the core envelops a long period. Moreover olive pollen has been found only at the top of the core. Between tree pollens, when *Quercus* (oak) pollen decreases *Fagus* and *Juglans* are present. These are not quite typical for Mediterranean communities, although they do occur at high altitudes with low temperatures and humidity. At 104-110 cm depth *Gelasinospora* have been found, indicating burned wood. In the core, dark layers present at 110 cm probably indicates forest fire events.
Waiting for radio-carbon dating of the core, we can turn our attention to the data coming from the research lead in Lago

1. TROELSTRA (S.) – Relazione preliminare della campagna di rilevamento paleoambientale del territorio di Himera, preprint, 2004.

di Pergusa (667 m a.s.l.), the main inland lake of Sicily (Sadori, Giardini 2007).
The comparison between micro-charcoal and pollen data coming from the sediment core of Lago di Pergusa indicated the linkages between fire, vegetation, and climate at local and regional scale.
Results about vegetation of the inland, as revealed by this research can be summarized as follows: "[…] The transition period related to the present interglacial reforestation, characterized by slowly increasing humidity, started about 10700 years BP. The onset of the wettest conditions of the Holocene occurred from about 9000 years BP until about 7200 years BP. Then a trend towards aridification began, leading to very dry conditions at about 3000 years BP. An unquestionable human impact on vegetation is found since 2800 years BP, when dry conditions are still however clear, although earlier land use traces are visible in the last four millennia." (Sadori, Giardini 2007, p. 176).
From the comparison between fire events at a regional scale (testified by micro-charcoal remains between 50 and 125 mm in diameter) and vegetation, the authors identify two regional fire events at 8200 and 7700 years BP, after a few hundred years since the emergence of *Fagus*.
Looking at Madonie core C7, we can note the emergence of *Fagus* and, soon after, two fire events attested by the presence of *Gelasinospora* (which means burned wood), and by two dark layers.
In the absence of radiocarbon dating, we do not suggest identifying these two fire events as the same events, but only the possibility that Madonie samples could cover a long period and be useful for a more detailed palaeoecological reconstruction.
New data, coming from Vallone Inferno rock shelter, will be shortly available. The information will regard vegetation, fauna and climate since the middle Neolithic age until modern age (probably with some lack in the data). Analyses of seasonality and function of the site are also in progress. Knowledge of the palaeoenvironment of Vallone Inferno rock shelter will be a useful asset in order to value the origin and development of some central activities of Holocene cultures of the region, as breeding or agriculture. In addiction to palaeobotanic and archaeozoological analysis our research will be supported by functional studies of lithic tools based on use wear analysis that will increase the knowledge of the economy of the site during different chrono/cultural stages.

6. Perspectives and conclusions

Our excursus about Madonie Mountains lets us make some remarks and leave many open questions.
The most ancient phases of prehistory, not only of Madonie, but of the entire island, are not sufficiently documented; surface finds should attest the presence of Lower Palaeolithic culture, but there are no evidences coming from excavated sites. During our research, we discovered a quaternary faunal remain, pertinent to an extinct dwarf elephant, in the section of an alluvial terrace where many years ago probable Lower Palaeolithic tools were founded (site of Giancaniglia, Termini Imerese). Some other lithic implements (quartz-arenitic and flint flakes, UT 20) have been founded, during our survey, in a section of another terrace (an Imera river terrace), in a place called Capraria, near the modern small town of Scillato.
The first peopling of the island is still an interesting and open question to investigate.
Going on with prehistoric occupation and use of the mountainous territory we can observe the presence at higher altitude of final Upper Palaeolithic groups probably interested not only to wild fauna, but also to raw materials, as flint sources of Monte Cervi zone.
With respect to raw material it's possible to note some differences in exploitation ways.
The survey we conducted on highest areas had pointed out that lithic scatters of the flint source zone are mainly constituted by flint tools, while the area with no flint and some quartz-arenitic beds is interested by the presence of a site with a predominant quartz-arenitic assemblage.
Next stage of our research should consider settlement strategies and seasonality taking into account also the already known sites (as Castello rock shelter) of the plane, near the coast.
One of the main topics of the Madonie research is the study of the origin and development of pastoralism in the island. The possibility to cross archaeological, archaeo-zoological and palaeobotanic record will give an idea of the development of pastoralism maybe since its establishment in Sicily. Many archaeological sites are interested by the presence of middle Neolithic phases. The absence of earlier phases of Neolithic in the mountainous territory could be itself an information about land use. On the contrary the considerable presence of middle Neolithic phases in the same area could testify an interest for middle altitude places, maybe linked to the earliest exploitation of summer pastures. More information about local fire events could clarify the chronology and the use of mountainous territory with respect to pastoral activities, as in the case of Alpine region (Marzatico 2007, p. 165; Mottes, Nicolis 2002, p. 249).
Some cultural phenomena in Alpine region are actually linked to pastoral practice development. It seems to be realistic that contact between Northern and Southern Alps become stronger during the first half of IV millennium in correspondence of the beginning of pastoral activity at higher altitudes (Marzatico 2007, p. 164 and previous

bibliography). It will be an asset of our research to clarify the relationship between pastoral farming development in the mountains and the main prehistoric cultural aspects concerning this part of the island.

Bibliography

Belvedere *et al.* 1988 : ALLIATA (V.), BELVEDERE (O.), CANTONI (A.), CUSIMANO (G.), MARESCALCHI (P.), VASSALLO (S.) – *Himera III.1. Prospezione archeologica nel territorio*, Roma, 1988.

Belvedere *et al.* 2002 : BELVEDERE (O.), BERTINI (A.), BOSCHIAN (G.), BURGIO (A.), CONTINO (A.), CUCCO (R.M.) LAURO (D.) – *Himera III.2. Prospezione archeologica nel territorio*, Roma, 2002.

Brochier *et al.* 1992 : BROCHIER (J.-E.), VILLA (P.), GIACOMARRA (M.), TAGLIACOZZO (A.) – Shepherds and sediments: Geo-ethnoarchaeology of Pastoral Sites. *Journal of Anthropological Archaeology,* 11, 1992, p. 47-102.

Carbonell, Rodrìguez 2006 : CARBONELL (E.), RODRÌGUEZ (X. P.) – The first human settlement of Mediterranean Europe. *Comptes rendus – Palevol*, 1-2, 2006, p. 291-298.

De Lumley 2009 : DE LUMLEY (H.) *et al*. – Les premières étapes de la colonisation de l'Europe et l'arrivée de l'Homme sur les rives de la Méditerranée. *L'Anthropologie*, 113, 2009, p. 1-46.

Forgia 2008 : FORGIA (V.) – Mountain environment and landscape in prehistoric Sicily: the Madonie region (Palermo, Italy). *In:* GRIMALDI (S.), PERRIN (T.), GUILAINE (J.) ed., *Mountain environments in prehistoric Europe: settlement and mobility strategies from Palaeolithic to the Early Bronze Age*, Proceedings of the XV UISPP World Congress (Lisbon, 4-9 September 2006), Vol. 26, Session C31, Oxford, BAR International Series, 1885, 2008, p. 160-169.

Frisia 2006 : FRISIA (S.), BORSATO (A.), MANGINI (A.), SPÖTL (C.), MADONIA (G.), SAURO (U.) – Holocene climate variability in Sicily from a discontinuous stalagmite record and the Mesolithic to Neolithic transition. *Quaternary Research*, 66, 2006, p. 388-400.

Gabrici 1930 : GABRICI (E.) – Scavo stratigrafico al «Ricovero sotto roccia» di Termini Imerese. *Bullettino di Paletnologia italiana*, 1930-1931.

Graziosi 1968 : GRAZIOSI (P.) – Découverte d'outils du Paléolithique inférieur en Sicile. *L'Anthropologie*, 72, 1968, p. 39-48.

Marzatico 2007 : MARZATICO (F.) – La frequentazione dell'ambiente montano nel territorio atesino fra l'età del Bronzo e del Ferro: alcune considerazioni sulla pastorizia transumante e l'economia di "malga". *Preistoria Alpina*, 42, 2007, p. 163-182.

Meli 1961 : MELI (M.) – Nuove facies del paleolitico in Sicilia. *Quaternaria*, 5, 1961, p. 322-323.

Mishra 2007 : MISHRA (S.), WHITE (M.J.), BEAUMONT (P.), ANTOINE (P.), BRIDGLAND (D.R.), LIMONDIN-LOZOUET (N.), SANTISTEBAN (J.I.), SCHREVE (D.C.), SHAW (A.D.), WENBAN-SMITH (F.F.), WESTAWAY (R.W.C.), WHITE (T.S.) – Fluvial deposits as an archive of early human activity. *Quaternary Science Reviews*, 26, 2007, p. 2996-3016.

Mottes, Nicolis 2002 : MOTTES (E.), NICOLIS (F.) – Il territorio del Trentino tra Neolitico recente ed età del Rame: analisi ed interpretazione dei dati. *Il declino del mondo neolitico. Ricerche in Italia centro-settentrionale fra aspetti peninsulari, occidentali e nord-alpini. In:* FERRARI (A.), VICENTINI (P.) (a cura di), *Atti Convegno* (Pordenone 5-7 aprile 2001), Museo delle Scienze, Comune di Pordenone (Quaderni del Museo Archeologico del Friuli occidentale, 4), 2002, p. 237-256.

Palma di Cesnola 1993 : PALMA DI CESNOLA (A.) – *Il Paleolitico Superiore in Italia. Introduzione allo studio*, Firenze, Garlatti & Razzai, 1993, 575 p.

Peretto 2005 : PERETTO (C.) – The first peopling of southern Europe: the Italian case. *Comptes Rendus Palevol*, 5, 2005, p. 283-290.

Sadori, Giardini 2007 : SADORI (L.), GIARDINI (M.) – Charcoal analysis, a method to study vegetation and climate of the Holocene: The case of Lago di Pergusa (Sicily, Italy). *Geobios*, 40, 2007, p. 173-180.

Sadori, Narcisi 2001 : SADORI (L.), NARCISI (B.M.) – The Postglacial record of environmental history from Lago di Pergusa, Sicily. *The Holocene*, 11,6, 2001, p. 655-670.

Sebasti 1995 : SEBASTI (F.) – Riparo del Castello a Termini Imerese (PA): analisi di una collezione del Paleolitico superiore. *Bullettino di Paletnologia italiana*, 86, 1995, p. 59-96.

Sebasti 1998 : SEBASTI (F.) – L'Epigravettiano della grotta Natale a Termini Imerese (PA): analisi di una collezione del Museo "L. Pigorini". *Bullettino di Paletnologia italiana*, 89, 1998, p. 19-30.

Vaufrey 1928 : VAUFREY (R.) – Le Paléolithique italien. *Archives de l'Institut de Paléontologie Humaine*, Mémoire 3, Paris, 1928.

Vigliardi 1968 : VIGLIARDI (A.) – L'industria litica della Grotta S. Teodoro in provincia di Messina. *Rivista di Scienze Preistoriche*, 23, 1968, p. 1-2.

Zampetti 1984 : ZAMPETTI (D.) – Il Paleolitico superiore del Riparo del Castello a Termini Imerese (Palermo): analisi di una collezione. *Origini*, XIII, p. 59-97.