Quaternary International xxx (2017) 1–17

Contents lists available at ScienceDirect

Quaternary International

journal homepage: www.elsevier.com/locate/quaint

The beginning of the Neolithic in Southern Italy and Sicily

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ARTICLE INFO

Article history:
Received 29 January 2017
Received in revised form
23 June 2017
Accepted 9 July 2017
Available online xxx

Keywords:
Mesolithic
Neolithic
Sicily
Southern Italy
Settlement strategies
Climate

ABSTRACT

The process of Neolithization of Southern Italy and Sicily covers about 500 years (6200–5700 cal BC) and involves two cultural horizons: Archaic Impressed Ware or "Impresse Arcaiche" and Advanced Impressed Ware or "Impresse Evolute". In Southern Italy the Neolithic peopling from the East is characterized by a "package" of plenty domesticated plants and livestock; in Sicily the adoption of the new economical system is apparently more slow and with no evidences of ruptures between the Mesolithic groups and first farmers. In this paper we present the chronological and cultural framework of the sixth millennium BC within the area of investigation, with an up-to-date bibliography about settlement and economic strategies, palaeoenvironment and climate. In Southern Italy several open air sites are known and well investigated, in Sicily researches have been concentrated along the shoreline caves. Both regions show similarities in settlement strategies on the long duration. From a cultural point of view, to a first homogeneity of the "Impresse Arcaiche" aspects, after 5800 cal BC, the emergence of original and distinctive features designs different geographical areas.

1. Southern Italy: the state of research

Southern Italy includes three regions, i.e. Apulia, Basilicata and Calabria. The archaeological research concerning the Neolithic of this area followed different paths, and the amount of the findings, along with the level of the publications, reflects this situation. Apulia is the region where the researches and studies have started earlier than the rest of Southern Italy. After the discovery of the first villages in the early 1900s (Pulo of Molfetta; Mosso, 1910), the systematic regional surveys on the plains of the eighties (Cassano and Manfredini, 1983; Tinè, 1983) was followed, in the last two decades, by the detailed study of the different categories of artifacts of the old and new excavations (Cassano and Manfredini, 2005; Guilaine and Cremonesi, 2003; Biancofiore and Coppola, 1997; Radina, 2002a). Thus, for this region, a substantial amount of data is available.

In Basilicata the discovery of the first "villaggi trincerati" dates back to 1900 (Ridola, 1924). In the seventies and eighties a systematic research in the eastern portion of region took place, in the Ofanto Valley and at Matera (Cipolloni Sampò, 1983). Unfortunately, however, these investigations have not always been followed by a comprehensive publication of the collected data.

In Calabria, most recently, after the survey projects started in the 80s and 90s of '900 in the Acconia plain (Ammerman, 1985), in the areas of Crotone (Marino, 1993), Stilo (Hodder and Malone, 1984), and Reggio (Tinè, 1992; Robb, 2004), the research focused on Northern Calabria (Tiné, 2004).

Differences in the quality of research across these regions allow a reconstruction of the Neolithic and Neolithization based on a different amount of information. From a general point of view, the dynamics of Neolithization started being discussed since the eighties, when the problem of the interaction between the Neolithic communities and the Mesolithic groups arose.

While the most recent stage of the Mesolithic is well documented in Northern and Central Italy, this is not the case for Southern Italy. The most significant evidence comes from Basilicata (Grotta di Latronico 3, Riparo Ranaldi), Apulia (Terragne) and Northern Calabria (Grotta della Madonna); some surface prospections recovered Mesolithic materials also in Salento (Torre Testa, Santa Foca and Laghi Alimini). On the basis of this limited evidence, the recent stage of the Mesolithic in Southern Italy appears to be characterized by the presence of three different aspects: Epiromanellian, Undifferentiated Epipaleolithic and Castelnovian (Martini, 1996; Martini and Tozzi, 1996; Tozzi, 1996; Lo Vetro and Martini, 2016).

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http://dx.doi.org/10.1016/j.quaint.2017.07.004
1040-6182/

Please cite this article in press as: Natali, E., Forgia, V., The beginning of the Neolithic in Southern Italy and Sicily, Quaternary International (2017), http://dx.doi.org/10.1016/j.quaint.2017.07.004

The very first phase of Neolithization is currently known from a number of settlements (Tinè, 2002, 2004). On the basis of their typical pottery styles, it is possible to recognize two different horizons: the Archaic Impressed Ware, documented in the Southeast (Apulia, Basilicata and Northern Calabria), and the Advanced Impressed Ware, which displayed complex decorative motifs ("Impresse evolute"); this latter cultural aspect has been divided into different local groups, covering the whole Southern Italy, from Apulia to Southern Calabria (Fugazzola et al., 2002; Pessina and Tinè, 2008).

1.1. The absolute chronology

The radiocarbon dates available for the recent stage of the Southern Mesolithic are few.

For the Castelnovian *facies* with trapezes, a series of dates comes from Latronico 3 (Dini et al., 2008); it frames this cultural horizon between 7300 and 6070 cal BC (Table 1), a time span which is very close to the dates from Northern Italy (Franco, 2011). The Mesolithic series of Latronico 3 have three other dates between 6220 and 5670 cal BC (code: R-451, R-450, R-452). Authors consider doubtful those three dates coming from reworked spits, as the presence of Neolithic potsherds shows (Dini et al., 2008).

Only one date can be related to the recent Mesolithic of Salento; it comes from site of Terragne (Gorgoglione et al., 1995): 6330–5990 cal BC.

Both the available dates from Grotta della Madonna, 7300-6240 cal BC are of uncertain interpretation, as lithics recall, from a typological point of view, the Undifferentiated Epipalaeolithic (Ancient Mesolithic; Tagliacozzo et al., 2016).

The Early Neolithic, initial-horizon - "Ceramiche Impresse Arcaiche" - can be dated back between 6210 and 5440 cal BC (Table 2). The spread of this horizon is well documented in the Southeast of the peninsula (Apulia, Basilicata and northern Calabria) and unknown in the Southwest (South-Central Calabria).

The horizon of "Ceramiche Impresse Evolute" is placed between 5990 and 4550 cal BC (Table 3). The dates of Trasano (LY-4409 and LY-5300) shows a high standard deviation that causes a too wide time span at calibration; so they are not considered.

This second phase covers the entire Southern part of the Italian peninsula. In Central-Southern Calabria this is the oldest phase of Neolithization documented so far.

The archaeological stratigraphy at Rendina site (Cipolloni Sampò, 1983) and Grotta San Michele di Saracena (Tiné and Natali, 2007) proves the chronological succession between the "Impresse Arcaiche" and the "Impresse Evolute".

The radiocarbon dates show a *hiatus* of a couple of centuries between the most recent Mesolithic dates and the oldest Neolithic ones. Perrin and Binder (2014) point out that it is not possible, at present date, to ascertain the assimilation of the technological system of the Neolithic groups from the local Mesolithic ones. The transmission of Mesolithic technologies, apart from convergence phenomena, might have occurred, following the Authors mentioned above, on the opposite side of the Adriatic, i.e. Greece and Albania, where the state of knowledge for the Mesolithic and ancient Neolithic does not allow the verification of such a case.

1.2. The lithic industry

A continuity between the Mesolithic and Neolithic groups might be recognized in the technological system of the chipped stone tools production; the other elements of the Neolithic "package" (pottery, polished stone items, agriculture, livestock breeding, settlement strategies, symbolic artifacts) are exclusive of Neolithic human groups that, at the end of the sixth seventh millennium cal. BC, reached the coasts of Southern Italy. However, the paucity of Mesolithic sites dating back to this chronological range limits the validity of such an interpretation (see Fig. 1).

At Latronico 3 (Dini et al., 2008), layers 40–65 in the trenches II and V of the old Cremonesi's excavations (Cremonesi, 1978b; Grifoni Cremonesi, 2003) revealed a cultural complex characterized by trapezes (Fig. 2.1–16). This can be compared with the better-known ones of Northern and Central Italy. The lithic industry includes cores, retouched tools, debris and unretouched artifacts. Flint sources were localized in the surroundings and a few pieces might have come from Gargano. The material arrived at the cave ready for chipping and only rarely the preparation took place in the site. It is attested the direct percussion technique, although the "regularity" of some blades might be related to the use of the pressure technique.

In Southern Italy, the lithic complex from Latronico 3 has a single comparison with that of the Riparo Ranaldi, in Eastern Basilicata (Borzatti von Löwestein, 1971). The lithic industry, which is not abundant, is characterized by the presence of geometrical tools, mainly trapezes, by the so-called "microburin technique", and by a débitage of small and regular bladelets. The remains of knapping are abundant, and indicate that the site was involved in the processing of the raw material. Flint is mostly of poor quality, often fissured, and derives from pebbles collected in the watercourses of the surrounding areas. A typological variability of the raw material coming from the different Mesolithic layers can be noticed: a fine vitreous flint of blond coloration is typical of the deeper levels, while a dark flint characterizes the most recent ones.

The lithic industry from other Southern sites shows different features. In Terragne di Manduria, in Salento, the lithic industry is characterized by the presence of some trapezes, so the deposit was

Table 1
Radiocarbon dates from the sites of recent Mesolithic in Southern Italy (C: charcoal). All dates have been calibrated with the OxCal 4.3 software (Bronk Ramsey, 2009) using the IntCal13 curve (Reimer et al., 2013).

Site	Context	Laboratory code	Age BP±	Age calBC2σ	Material	Horizon	References
Madonna	US 637 spit II	LTL-13714A	8135 ± 40	7300–7040	C	Undifferentiated Epipalaeolithic	Tagliacozzo et al., 2016
Latronico 3	lev A spits 63-64	R-453	8024 ± 100	7300–6640	C	Castelnovian	Dini et al., 2008
Latronico 3	lev. A spit 55	R-449	7800 ± 90	7030–6460	C	Castelnovian	Dini et al., 2008
Latronico 3	lev. D spit 43	R-446	7620 ± 90	6650–6260	C	Castelnovian	Dini et al., 2008
Latronico 3	lev. B spits 53-54	R-448	7570 ± 90	6600–6240	C	Castelnovian	Dini et al., 2008
Madonna	US 548 spit I	LTL-13713A	7463 ± 40	6420–6240	C	Undifferentiated Epipalaeolithic	Tagliacozzo et al., 2016
Latronico 3	lev. D spits 41-42	R-445	7420 ± 90	6440–6080	C	Castelnovian	Dini et al., 2008
Latronico 3	lev. B spit 52	R-447	7400 ± 90	6430–6070	C	Castelnovian	Dini et al., 2008
Terragne	US 5	Beta-67093	7260 ± 70	6330–5990		Castelnovian? Romanellian tradition?	Di Lernia and Fiorentino, 1995
Latronico 3	lev. A spit 58	R-451	7160 ± 80	6220–5890	C	Castelnovian	Dini et al., 2008
Latronico 3	lev. A spit 57	R-450	7045 ± 90	6070–5730	C	Castelnovian	Dini et al., 2008
Latronico 3	lev. A spits 59-60	R-452	6970 ± 90	6020–5670	C	Castelnovian	Dini et al., 2008

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