



## Article

# The paradoxical pattern of the Mesolithic evidence in Liguria: piecing together the puzzle

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### Key words

- Settlement
- Mesolithic
- Northern Italy
- Liguria

### Parole chiave

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### Summary

Several open-air Mesolithic sites are known, mainly located on the rugged eastern bank. All of them are surface collections of chipped artefacts doubtfully attributed, only on techno-typological grounds, to the Sauveterrian or to the Castelnovian. However none of them provided any biostratigraphical context; therefore archaeobotanical and archaeozoological data are completely missing, as well as any C14 dating. Conversely, any Mesolithic industry is lacking in the few sites where some lower Holocene/early Atlantic environment insights and C14 datings are available. The strong gap between dates and cultural evidence underlines a patchy and paradoxical regional pattern.

### Riassunto

Sono note diverse stazioni mesolitiche di superficie, prevalentemente concentrate in Liguria orientale, le quali hanno restituito manufatti attribuibili, in modo dubitativo e solo su base tecno-tipologica, al Sauveterriano e al Castelnoviano. Non sono noti siti mesolitici stratificati e datati, contenenti chiare evidenze culturali. Le uniche datazioni attribuibili a questa fase provengono da depositi di interesse archeologico-ambientale, privi di manufatti caratteristici. La dicotomia tra datazioni ed evidenze culturali rende quindi la situazione ligure lacunosa e paradossale.

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## Introduction - A challenging matter

Liguria is a long arc-shaped chain of mountains, facing the Mediterranean to the South and the Po Plain to the North. Several open-air Mesolithic sites are known, mainly located on the rugged eastern bank (Franco 2011; Maggi & Negrino 1992) (Fig. 1). All of them are surface collections of chipped artefacts of Sauveterrian or Castelnovian typology. However none of them provided any biostratigraphical context; therefore archaeobotanical and archaeozoological data are completely missing, as well as any C14 dating. Conversely, a few sites yielded some environment archaeological insights without any association to industry. A few caves located in the west bank have provided the only stratigraphical occurrence of tools C14 dating to the Mesolithic (Alessio *et al.* 1967, 1968). However, ironically, such artefacts are of final Epigravettian typology and the suggestion of the continuation of a Palaeolithic way of life up to almost the VII millennium cal BC is hardly tenable. New lucky excavations and detailed investigations are requested, in order to sort out the assessment of the Mesolithic of a region that knew the earliest neolithisation of Northern Italy (Binder & Maggi 2001; Binder *et al.* 2008; Branch *et al.* 2014).

## The archaeological evidence

Our knowledge about the Ligurian Mesolithic is still rather fragmented, both for the scarcity of good archaeological contexts and for the lack of thorough studies and researches (Fig. 1; Tab. 1).

Flint artefacts, including geometrics, attributable to the passage from final Upper Palaeolithic to the Sauveterrian, have been found at La Mortola, close to the sea and not far from Balzi Rossi caves (Ventimiglia, Imperia)(Baroni & Biagi 1991), from the open-air site of Ortovero, in the inland of Albenga (Savona)(Negrino *et al.* 2015) and at Colla di San Giacomo, a mountain pass near Finale Ligure (Savona) (Franco 2011: p. 274; Arobba & Vicino 2013). Like-sauveterrian finds have been also discovered in open-air sites located in the Apennine range to the east of Genoa, on the mountains but also on river terraces at the bottom of the valleys.

Late Mesolithic evidence (Castelnovian) is apparently more common. The interesting site of Pian del Re, near Imperia, is still unpublished (even if problematic, because a mixing of different chronological aspects, from the Epigravettian period to the Neolithic one: Didier Binder pers. com.). Another site related to this period is Prate delle Ranghe, in the high Vara valley, located on a wide mid-slope terrace (Varese Ligure, La Spezia)(Ghiretti & Guerreschi 1988; Negrino 2002: note 23, p. 360); the presence of a buried layer with charcoals, could provide in the future a direct date for the Ligurian Castelnovian. In fact, none of the Ligurian Mesolithic sites have been yet dated.

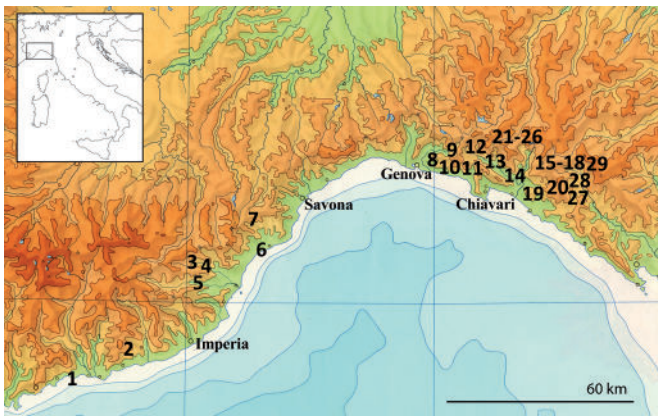


Fig. 1 - Map of Liguria with the localities mentioned in the text. / Ubicazione delle località citate nel testo.

With the exception of the sites of La Mortola and Pian del Re, in Western Liguria, where the armatures like triangles and trapezes are quite abundant, the others known sites are very poor in this kind of artefacts (Baffico *et al.* 1983, 1984; Colella & Maggi 1987; Del Lucchese & Salonio 1987; Maggi & Nebiacolombo 1987; Odetti 1987; Odetti & Starnini 1987; Salonio 1987; Starnini & Menni 1992; Starnini & Rembado, 1992; Starnini & Tiscornia 1987), in sharp contrast with what happens in other areas, such as in Trentino, but also in the surrounding regions (Provence, Emilia and Tuscany)(Brochier 1982; Franco 2011; Tomasso *et al.* 2014; Walsh K. *et al.* 2007); the high presence of non retouched blanks and the rarity of geometrics tools is an intriguing subject (Maggi & Negrino 1992). Even the chronological attributions, in the absence of secure stratigraphic contexts, remain largely hypothetical, particularly those relating to the Sauveterrian; in some Italian Castelnovian sites, in fact, trapezes are often associated to geometrics of older typology, like triangles (see discussion in Franco 2011).

The levels of the Arene Candide cave (Finale Ligure, Savona) immediately underlying the Early Neolithic units, yielded few not diagnostic artefacts, although two radiometric dates made on charcoals belong to the lower Holocene and early Atlantic (Beta-109618: 7640±60 uncal BP - C13[-27,5], 6604-6403 cal BC<sup>1</sup>; Beta-109619: 9090±60 uncal BP - C13[-27,1], 8527-8222 cal BC). This evidence suggests the sporadic use of the cave during this phase (Guerrini 1976; Maggi 1997; Tiné 1976, 1999).

A coring from Pozza dell'Orso (Monte Caucaso, Neirone) in the Genoese Apennine, provided evidence of a buried soil, that dates to 6082-5922 cal BC (Beta-177066: 7150±40 uncal BP). A few flakes of flint and jasper collected on the surface suggest this is a possible Castelnovian site suitable for excavation.

Radiometric dates attributed to the Early Holocene also come from some bio-stratigraphic contexts devoid of industries. At Grotta del Bandito, in Lagorara Valley (Maissana, La Spezia), some charcoals gathered from a deep colluvial level date to 8271-7371 cal BP (Beta-60703: 8670±180 uncal BP)(Campana *et al.* 2002).

Very interesting is what can be observed at the Mogge di Ertola peat bog (Rezzoaglio, Genova). Here several dates of Mesolithic age (from 8912±100 uncal BP - 8291-7739 cal BC till 7190±60 uncal BP - 6216-5931 cal BC) were obtained from basal peat & debris-flow layers, possibly related to deforestation by fire of the surrounding slopes (Cevasco *et al.* 2013). This is suggested by a peak of micro-charcoals, by a significant reduction of the white fir forest and by other fluctuation in the pollen sequence. A similar, wider, concentration of micro-charcoals also occurs in the Roman levels, where the anthropic impact is clearly shown by several soils and vegetational markers, including the definitive replacement of the white fir by the beech. Therefore, for comparison, it can be argued that the environmental modifications, including the formation of a small lake, observed in the levels C14 dated to the Mesolithic could also be due to human activities, possibly related to the management of environmental resources. .

The conventional radiometric measurements, made in the Sixties of the last century, from the Stefanin cave, in the inland of Albenga (Savona), of Mesolithic date but associated with Epigravettian artefacts, are questionable (Alessio *et al.* 1967; Leale Anfossi 1972). At Arma dello Stefanin, which dates have been obtained from several charcoals, the refitting of the lithic artefacts showed mixing among the strata. However an AMS date (8895±270 uncal BP, 8786-7382 cal BP) from new "control" excavation carried out in the eighties, still looks too young against the associated Late Epigravettian lithic typology (Barker *et al.* 1990; Biagi 1991; Biagi & Maggi 1984; Biagi *et al.* 1987). Therefore the question of a local cultural delay is somehow open, although hardly tenable. The dated level is sealed by a

1 Calibration at 95.4% confidence interval (OxCal 4.2, IntCal 13; Reimer *et al.* 2013).

**Tab. 1** - Ligurian sites with Mesolithic artifacts or dated to lower Holocene/early Atlantic. Calibration at 95.4% confidence interval (OxCal 4.2, IntCal 13; Reimer et al. 2013). / Siti liguri che hanno restituito manufatti mesolitici o che sono stati datati all'Olocene antico o all'inizio dell'Atlantico. Calibrazione al 95.4% di probabilità (OxCal 4.2, IntCal 13; Reimer et al. 2013).

	NAME OF THE SITE	PROVINCE	ALTITUDE (ASL)	TPOLOGY OF THE SITE	LITHIC ARTIFACTS	RADIOCARBON DATES	CULTURAL ATTRIBUTION
1	Punta della Mortola - Ventimiglia	IM	10	Open-air site (reworked deposit)	Geometrics	-	Epigravettian/ Sauveterrian
2	Pian del Re - Perinaldo	IM	850	Open-air site	Geometrics	-	Castelnovian
3	Arma dello Stefanin - Aquila d'Arroschia	SV	450	Cave (stratified deposit)	(Late Epigravettian?)	GX-16959: 8895±270 BP charcoal (8786-7382 cal B) BlN-3567: 8710 ±70 BP charcoal (8165-7586 cal BP) GIF-7210: 8300±900 BP charcoal (10165-5621 cal BP)	Lower Holocene
4	Arma di Nasino	SV	250	Rock shelter (stratified deposit)	(Late Epigravettian?)	Beta-76823/CAMS-16559: 7870±60 BP bone collagene (7029-6596 cal BP)	Early Atlantic
5	Ortovero	SV	60	Open-air site (stratified deposit)	Not diagnostic	-	Epigravettian/ Sauveterrian
6	Caverna delle Arene Candide - Finale Ligure	SV	90	Cave (stratified deposit)	Not diagnostic	Beta-109619: 9090±60 BP charcoal (8527-8222 cal BP) Beta-109618: 7640±60 BP charcoal (6604-6403 cal BP)	Lower Holocene and early Atlantic
7	Colla di San Giacomo - Finale Ligure	SV	790	Open-air site	Geometrics	-	Sauveterrian
8	Passo Giuche - Monte Bastia - Genova	GE	750	Open-air site	Geometrics	-	Castelnovian
9	Monte Traso - Bargagli	GE	850	Open-air site	Geometrics	-	Sauveterrian
10	Nasoni / Monte Rotondo - Bogliasco	GE	750	Open-air site	Geometrics	-	Castelnovian
11	Monte Uccellato - Sori	GE	780	Open-air site	End-scraper and retouched blades	-	Mesolithic?
12	Pozza dell'Orso - Monte Caucaso - Neirone	GE	1150	Open-air site (stratified deposit - coring)	Not diagnostic	Beta-177066: 7150±40 BP charcoal (6082-5922 cal BP)	Castelnovian
13	Ferrada di Moconesi	GE	120	Open-air site (stratified deposit)	Geometrics	-	Sauveterrian
14	Cian dei Tenenti - Calvari	GE	50	Open-air site (stratified deposit - coring)	No artifacts	Beta-118952: 9430±40 BP charred material (8811-8617 cal BP)	Lower Holocene
15	Bosco delle Lame - Borzonasca	GE	1500	Open-air site	Geometrics	-	Castelnovian
16	Colmo Rondio - Borzonasca	GE	1170	Open-air site	Geometrics	-	Sauveterrian and Castelnovian
17	Malga Perlezzi - Borzonasca	GE	1650	Open-air site	Geometrics	-	Sauveterrian
18	Prato Mollo - Borzonasca	GE	1500	Open-air site	Geometrics	-	Sauveterrian and Castelnovian
19	Nido del Merlo - Ne	GE	700	Open-air site	Geometrics	-	Sauveterrian
20	Passo della Camilla - Ne	GE	720	Open-air site	Geometrics	-	Sauveterrian and Castelnovian
21	Passo dello Zovallo - S. Stefano d'Aveto	GE	1400	Open-air site	Geometrics	-	Castelnovian

Tab. 1 - continued / continua

	NAME OF THE SITE	PROVINCE	ALTITUDE (ASL)	TYOLOGY OF THE SITE	LITHIC ARTIFACTS	RADIOCARBON DATES	CULTURAL ATTRIBUTION
22	Groppo Rosso - S. Stefano d'Aveto	GE	1595	Open-air site	Geometrics	-	Castelnovian
23	Prato della Cipolla - S. Stefano d'Aveto	GE	1600	Open-air site	Geometrics	-	Castelnovian
24	Mogge di Ertola - Rezzoaglio	GE	1115	Open-air site (stratified deposit - peat bog)	No artifacts	LTL-547A: 8912±100 BP charcoal (8291-7739 cal BP) LTL-1220A: 7190±60 BP peat (6216-5931 cal BP)	Lower Holocene and early Atlantic
25	Passo Esola - Rovegno	GE	1300	Open-air site	Geometrics	-	Castelnovian
26	Pian Brogione - Rovegno	GE	1150	Open-air site	Geometrics	-	Castelnovian
27	Località U Péou - Torza - Maissana	SP	500	Open-air site	Geometrics	-	Castelnovian
28	Grotta del Bandito - Maissana	SP	920	Cave (stratified deposit)	No artifacts	Beta-60703: 8670±180 BP charcoal (8271-7371 cal BP)	Lower Holocene
29	Prate delle Ranghe - Varese Ligure	SP	805	Open-air site (stratified deposit)	Geometrics	-	Castelnovian

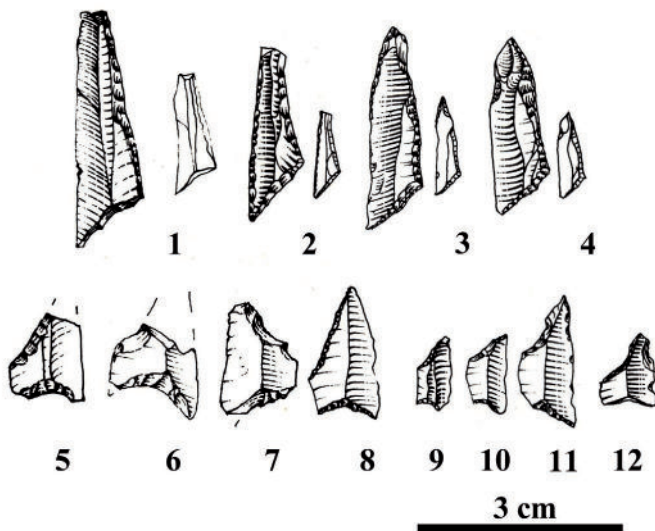


Fig. 2 - Mesolithic artifacts: triangles (1-4) and trapezes (5-12). Ferrada di Moconesi (1); Nido del Merlo (2); Prato Mollo (3-4, 12); Passo Giuche, Monte Bastia (5); località U Péou, Torza (6); Prate delle Ranghe (7); Colmo Rondio (8); Prato della Cipolla (9); Bosco delle Lame (10-11). / Manufatti mesolitici: triangoli (1-4) e trapezi (5-12). Ferrada di Moconesi (1); Nido del Merlo (2); Prato Mollo (3-4, 12); Passo Giuche, Monte Bastia (5); località U Péou, Torza (6); Prate delle Ranghe (7); Colmo Rondio (8); Prato della Cipolla (9); Bosco delle Lame (10-11).



Fig. 3 - The Mesolithic site of Prato Mollo (Borzonasca, Genova). / Il sito mesolitico di Prato Mollo (Borzonasca, Genova).

floorstone layer, containing charcoals. Thus It could be argued that, as occurs in Arene Candide cave, these charcoals might be related to occasional presence of Mesolithic people, so scanty not to leave amount of artefacts of archaeological relevance.

### Solving the enigma

The archaeological framework is therefore paradoxical, since it provides contradictory evidence. Thus, in order to undertake an updated discussion of this historical riddle it is necessary to face the following steps:

- proceed with the study of unpublished sites;

- carry on new surveys and new excavations in caves, shelters and open-air sites;
- do new radiocarbon dates.

This is the only way to build in a scientifically valid manner the behavioural of the Mesolithic communities in an area where the earliest neolithisation of Northern Italy occurred, in order to get a coherent historical pattern out of the paradox.

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