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Chapter 5: The Beaker Transition in Mediterranean France

Olivier Lemerrier

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BACKGROUND TO BEAKERS



INQUIRIES INTO REGIONAL
CULTURAL BACKGROUNDS OF
THE BELL BEAKER COMPLEX

EDITED BY

HARRY FOKKENS & FRANCO NICOLIS



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THE BEAKER TRANSITION IN MEDITERRANEAN FRANCE

Olivier Lemerrier

Abstract

In Mediterranean France, the end of the Neolithic is now well-known. Many cultural groups are chronologically and geographically defined (Rhône-Ouvèze, Fontbouisse, Vérazien...) and the origin of the Beakers phenomenon seems clearly foreign in this context. The existence of this cultural variety in the Final Neolithic leads to:

- Differences in the first Beaker settlements in these areas,
- Various types of acculturation, partial or total, of the indigenous groups, with sometimes the survival of certain Late Neolithic traditions,
- The development of two Middle regional Bell Beakers groups (Pyrenean group and Rhodano-Provençal Group) after the first phenomenon.

The beaker pots known on several hundreds of sites make it possible to recognise three broad chronological phases, in French: *Campaniforme Ancien* (Early Bell Beaker), *Campaniforme Récent* (Middle Bell Beaker) and *Campaniforme Tardif* (Late Bell Beaker). In the early phase regional differences appear, with in the Provence a strong Beaker establishment on littoral settlements, and on naturally defended hill-top sites with substantial assemblages. Only rare goblets seem diffused towards the indigenous sites inside the region. In Eastern Languedoc, in the area of the Fontbouisse group, this oldest Beaker phase does not exist and only some pots seem present on indigenous sites. During the 'recent' phase, the development of the Middle regional Beaker groups shows a more or less complete acculturation of the local populations. It is only at this time that the Bell Beaker Culture really develops in Languedoc. These regional

differences affect the development of Early Bronze Age. These observations and the integration of the recent data make it possible to argue about the origin and even the nature of the Beaker phenomenon, and to propose a regional model which could apply to several areas of development of Bell Beakers in Europe.

Keywords

Mediterranean, France, Bell Beakers, Colonisation, Acculturation

Introduction

Mediterranean France, between the Iberian and Italian peninsulas, is a vast coastal front extending from the Alpine massifs in the east to the Pyrenees in the west. It is bordered on the north by a series of smaller massifs (Montagne Noire, Causses, Cévennes and Préalpes). The Aude Valley to the west and the Rhône Valley to the north, as well as the shores at the end of the Pyrenees and the foot of the Alps provide large communication routes with the Mediterranean peninsula and Europe (Fig. 1).

With respect to the end of the prehistoric period and the transition from the Neolithic to the Bronze Age, several thousand sites are known here. A long history of research over many decades has led to the proposal of broad chronological and cultural frameworks. More recently, the Bell Beaker phenomenon has been the focus of a

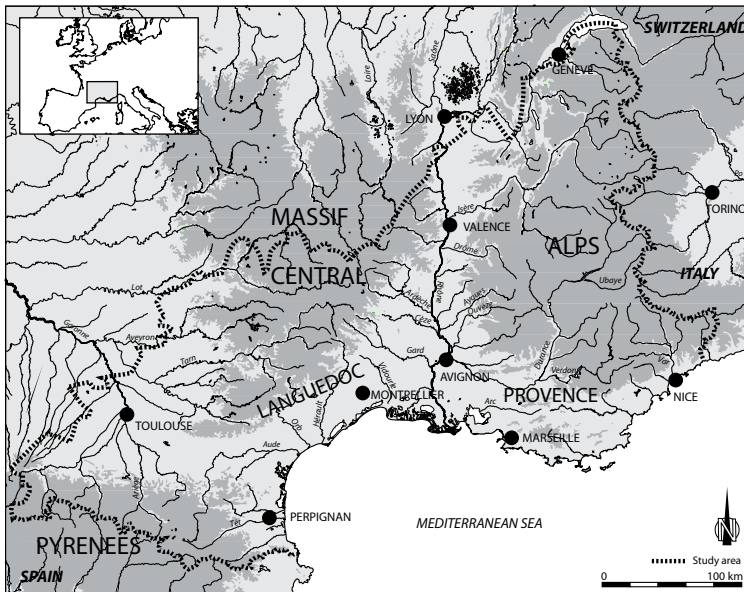


Figure 1. Geographical situation of the study area.

series of particular research projects at a regional scale in France and Western Europe. Several studies have concentrated on decorated Bell Beaker pottery, addressing the technology underlying the decoration motifs (Salanova 2000), fabrics (Convertini 1996; 2009), common ware pottery (Besse 2003) and the lithic industry (Furestier 2007), while a regional synthesis of the data for the southeast has been made by Lemerrier (2004*b*). Parallel to that, several studies have focused on the end of the Neolithic in Mediterranean France, particularly in the Languedoc (Guilaine and Escallon 2003; Carozza *et al.* 2005; Coularou *et al.* 2008...) and the Provence. Thematic approaches include ceramics (Cauliez 2009), animal economy (Blaise 2010) and periodisation (Lemerrier 2007; Lemerrier *et al.* 2010), as well as the transition to and origins of the Bronze Age (Vital 2000; 2001; 2004; 2008; Vital *et al.* in press).

This highly dynamic research now enables, in a better understood chrono-cultural context at the end of the regional Neolithic (Fig. 2), the proposal of several new research directions concerning the establishment and development of the Bell Beaker Culture and the transition from the Neolithic to the Bronze Age.

In Mediterranean France, more than 540 sites (Fig. 3) yielding Bell Beaker artifacts have currently been inventoried (around 170 burials, 230 settlements or domestic sites and 130 sites of unknown function). The high number of settlements in relation to burials provides important information since it indicates that the Bell Beaker Culture is in this region, not simply a “funerary assemblage”. This forms a solidly basis to analyse find assemblages and their context with respect to the appearance and development of the Bell Beaker

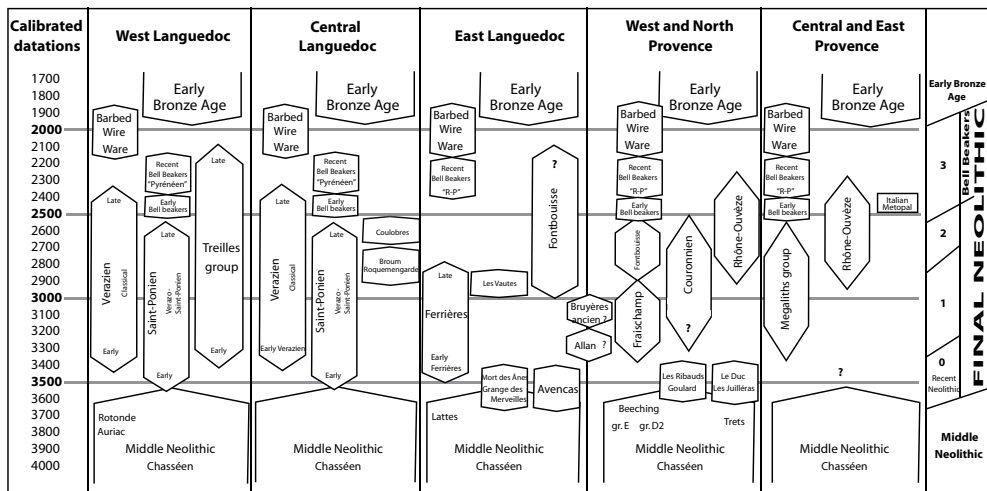


Figure 2. Late Neolithic periodisation in Mediterranean France.

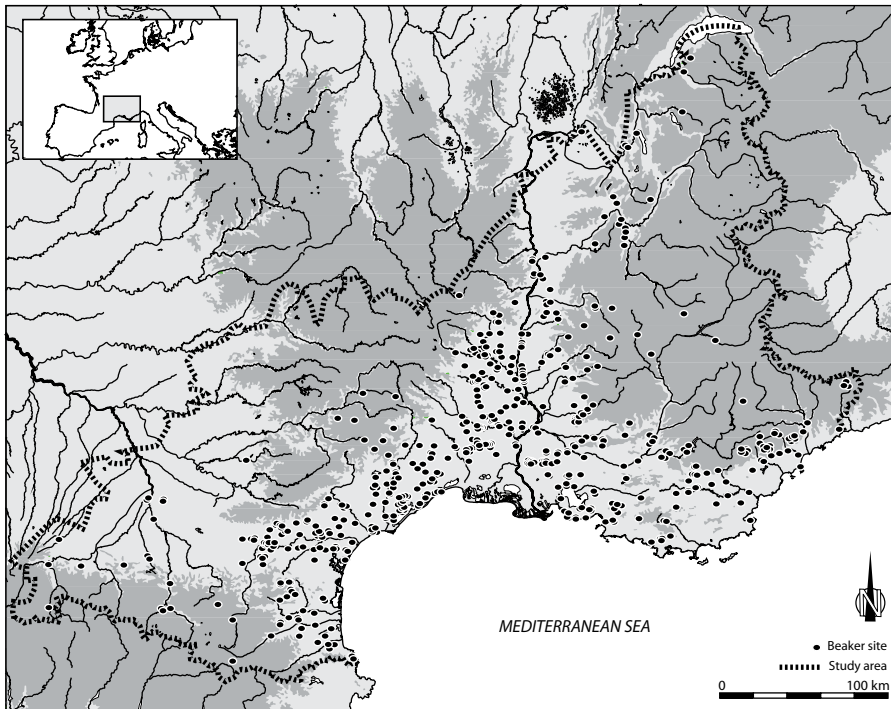


Figure 3. Distribution map of Beaker sites in Mediterranean France.

Culture. This phenomenon remains essentially determined by the presence of a specific type of decorated pottery, but can now in addition be defined on the basis of certain characteristics of common ware pottery, lithic and metal industries and certain types of ornamentation.

In the 1960s four Bell Beaker ceramic styles were defined for certain regions, such as the Pyrenees (Guilaine 1967; 1976) and the Provence (Courtin 1967; 1974), and then extended to cover the entire region. The recent re-examination of the Bell Beaker in southeastern France, the eastern half of Mediterranean France has clarified the position of different styles. Based on the most recent data obtained from more than 310 sites totalling more than 1500 decorated vases (Lemerrier 2004b) (Fig. 4), a periodisation in three chronological phases has now been proposed: the Early, Middle and Late Bell Beaker phenomenon, cultures and tradition (Lemerrier 1998).

The chronological position of the Bell Beaker in the second half of the 3rd millennium BC has been verified by direct and indirect dates. However, this does not contribute enormously to the periodisation for Bell Beaker assemblages. The periodisation is based on

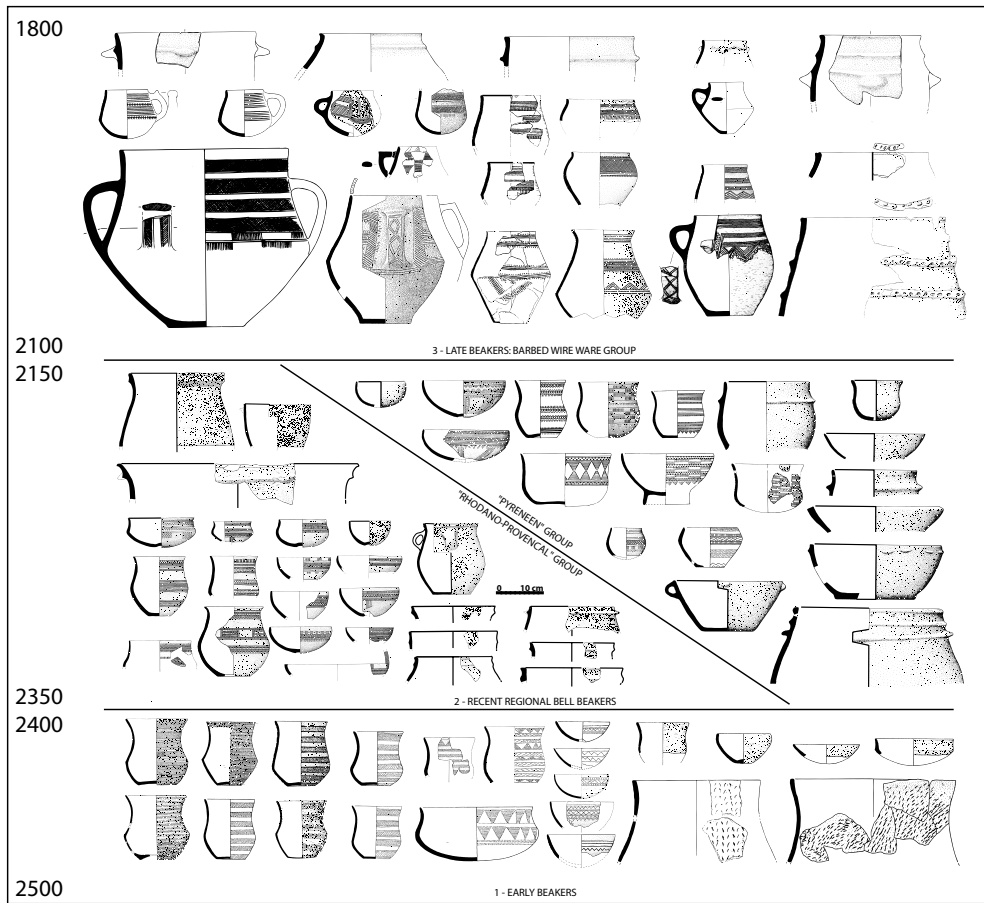


Figure 4. Beaker pottery periodisation in Mediterranean France (drawings after: Bill 1973; Sauzade et al. 1974; Courtin 1976; 1978; Sauzade 1983; Courtin et al. 1985; Guilaine et al. 1989; 2001; Barge-Mahieu 1992; Roudil 1993; Jallot et al. 1996; Vaquer 1998; Vital 2000; Buisson-Catil and Vital 2002; Vignaud 2002; Ambert 2003; Leonini 2003; Lemerancier 2004b).

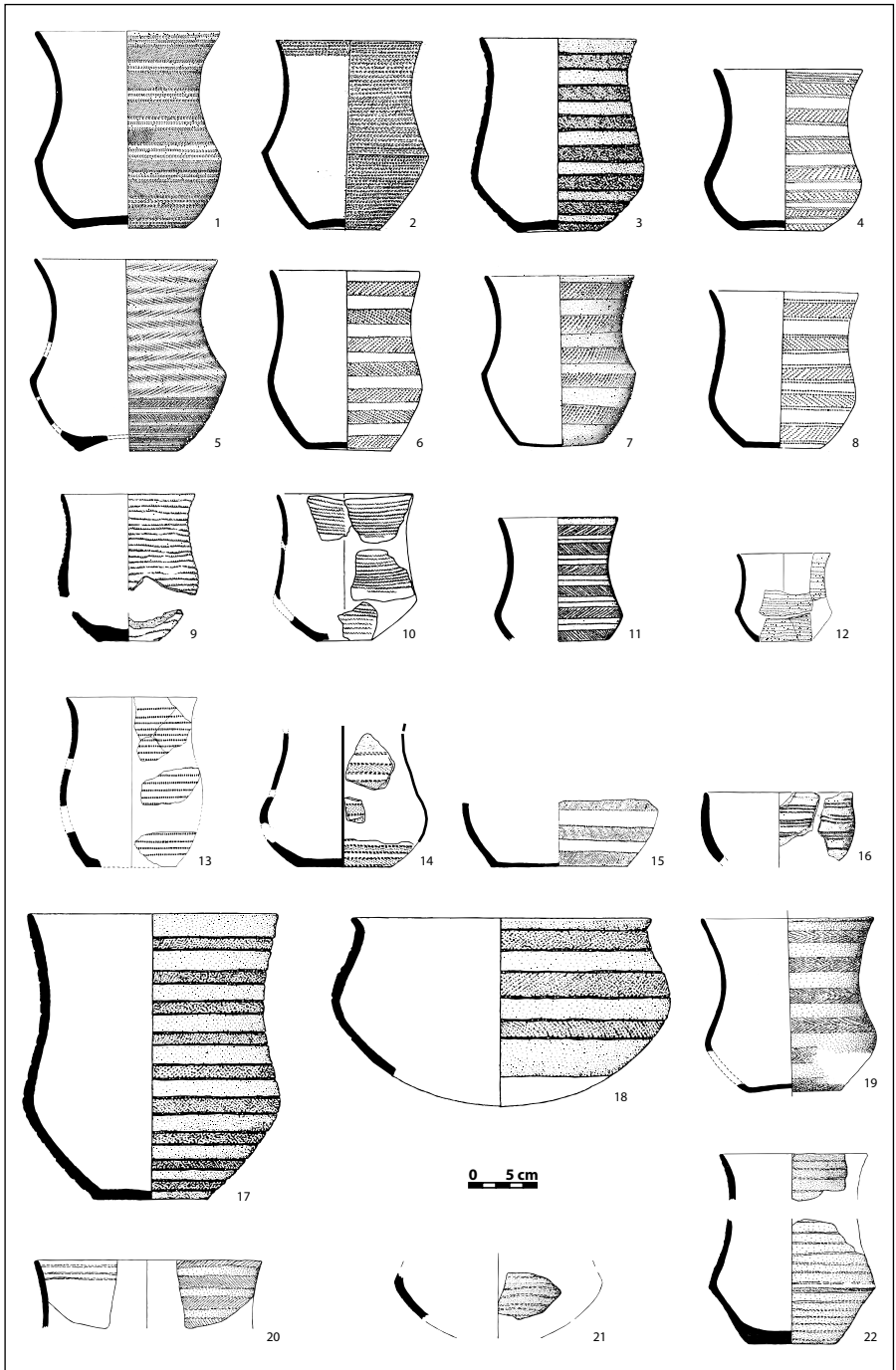
archaeological observations rather than on absolute dates, which are not abundant anyway. Moreover, they have been obtained in the early stage of radiocarbon dating and are weakened by often large standard deviations. In addition they are sometimes completely incoherent and for the first phases in particular, fall within a period that is difficult to calibrate. At present, 45 dates have been published for the Bell Beaker Culture in Mediterranean France, but these are very unequally distributed among the known Bell Beaker styles. While the three groups defined seem to have a chronological value, the range covered by the dates is still unsatisfactory. Only the final period with pottery with barbed wire decoration appears to be well-supported chronologically.

Archaeological observations, in contrast, are abundant and convergent. These are based first on typological analyses which enable observation of changes in decorative styles and ceramic morphologies between phases. They are also based on stratigraphy at many sites, and confirm the succession from Bell Beakers of standard and geometric dotted style to the Rhodano-Provençal Bell Beakers, followed by groups with barbed wire decoration. These sites are in particular Pendimoun rock-shelter (Castellar, Alpes-Maritimes: Binder 2003), Chauve-Souris cave (Donzère, Drôme: Vital 2001) and Vignaud 3 (Langlade, Gard: Hayden *et al.* in press). In addition, the sequence is also confirmed by an increasing number of discoveries of Bell Beaker pottery associated with local cultures of the Final Neolithic while it becomes 'autonomous' in the context of the Rhodano-Provençal group, as did the Pyrenean group (Lemerrier 2003*a*). Data for common ware pottery associated with Bell Beaker vessels support this pattern of the association of early Bell Beaker vessels with local common ware pottery, followed by the development of a specifically Bell Beaker common ware pottery with the late Pyrenean and Rhodano-Provençal groups (Lemerrier 2004*b*).

The Early Bell Beaker phase (*Campaniforme Ancien*)

The earliest Bell Beakers present in southeastern France correspond to two distinct stylistic groups. One is composed of maritime or international style pottery and its most common variants (Fig. 5). These include beakers with a limited range of decoration. These decorations are dotted (made with a toothed tool: shell or comb) and/or corded. The decorative motifs generally cover the entire vessel, but are fairly unvarying and structured exclusively horizontally. They are composed of linear decorations, bands of lines or hatched bands. Decorated zones may be separated by empty zones. Internal

*Figure 5. Early Bell Beaker pottery. 1. Forcalquier – La Fare, 2. Mèze – Puech Badieu, 3. Trèbes – Le Mourral, 4. Bartrès – La Halliade, 5. Cessenon – Aumet, 6. Laroque-de-Fa – Dolmen 8 de la Clape, 7. Mailhac – Boun Marcou, 8. Monze – Dolmen de la Madeleine, 9. Saint-Paul-de-Varces, 10. Mailhac – Grotte de la Treille, 11. Donzère – Baume des Anges, 12. Sanilhac – Baume Saint-Vérédème, 13. Cabris – Dolmen du Coulet de Stramousse, 14. Remoulins – Grotte de la Sartanette, 15. Sainte-Anastasie – Grotte des Frères, 16. Sanilhac – Baume Saint-Vérédème, 17 and 18. Trèbes – Le Mourral; 19. Laroque-de-Fa – Dolmen 5 de la Clape, 20-22. Gorniès – Grotte du Claux. (1 after Lemerrier 2004*b*; 2 after Montjardin *et al.* 2000; 3, 17, 18 after Vaquer 1998; 4, 6, 8, 10 after Guilaine *et al.* 2001; 5, 7 after Ambert 2003; 9 after Bill 1973; 11 after Lambert 1976; 12, 16 after Vigneron 1981; 13 after Courtin 1962; 14 after Salanova 2000; 15 after Gutherz and Hugues 1980; 19 after Bocquet 1993; 20-22 after Roudil 1988).*



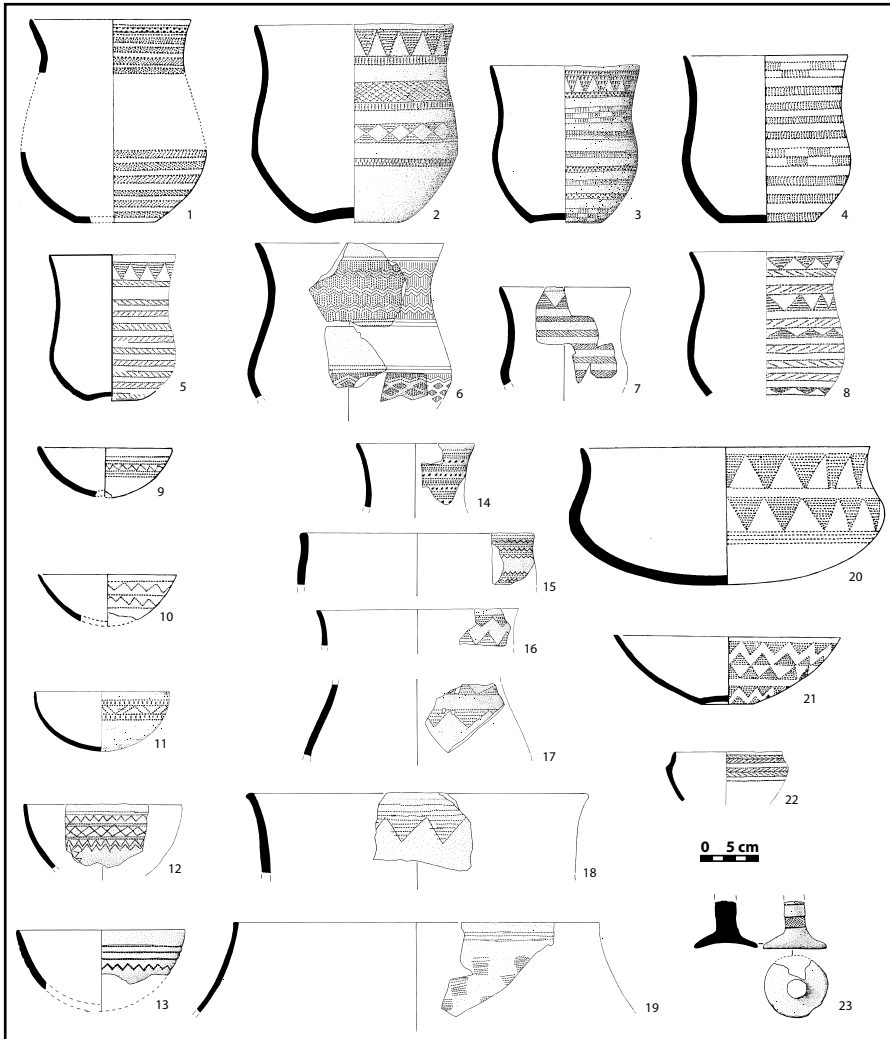


Figure 6: Early Bell Beaker pottery. 1. Mailhac – Dolmen de Boun Marcou, 2 and 3. Saint-Vallier – Tombe 2 de Sainte-Anne, 4. Mons – Grotte de Peygros, 5. Fontvieille – Hypogée du Castellet; 6. Le Plan d’Aups – Tumulus du Gendarme, 7. Avignon – La Balance, 8. Fontaine – Abri de Barne-Bigou, 9 and 10. Avignon – La Balance, 11. Vence – Baume Claire, 12. Avignon – La Balance, 13. Avignon – Place du Palais, 14-19. Simiane – Col Sainte-Anne, 20 and 21. Mailhac – Dolmen de Boun Marcou, 22. Fontvieille – Hypogée du Castellet, 23. Avignon – Place du Palais (1, 4, 9, 10, 20, 21 after Guilaine et al. 2001; 2, 3 after Gassin 1986; 5, 8, 22 after Bill 1973; 6, 11-12, 14-19 after Lemerrier 2004b; 13, 23 after Sauzade 1983).

decorations are rare, but present in some cases. The form variety is limited almost exclusively to beakers of different size, the bases are generally flat or concave.

The second group, called “geometric dotted”, is based on the same general principles, but shows a wider variety (Fig. 6). This variety is first noted with respect to form, which includes beaker

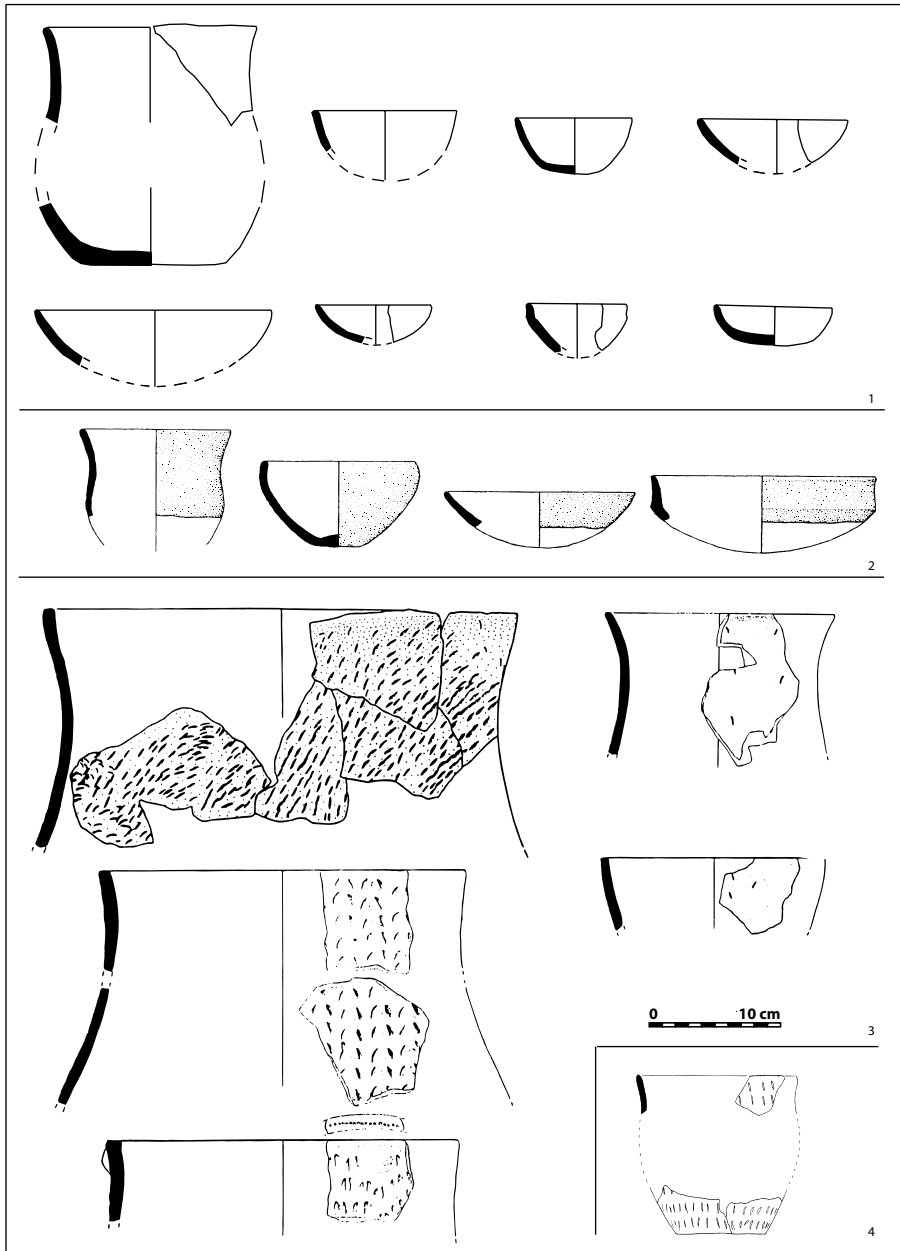


Figure 7. Early Bell Beaker phase : undecorated pottery. 1. Orgon – Les Calades, 2. Trèbes – Le Moural. Fingernail decoration, 3. Orgon – Les Calades, 4. Fontaine – Abri de Barnebigou (1 and 3 after Barge-Mahieu 1992; 2 after Vaquer 1998; 4 after Bill 1973).

forms, but also many low forms, such as shallow bowls, deep bowls, basins, cups, *etc.*, generally with flat or concave bases, but also rounded bases. Dotted decorations present more numerous motifs like triangles, lozenges and squares that may be hatched. These are

associated with hatched or linear bands respecting the same general rules for organisation. Noteworthy is the presence of vertical bands converging at the base.

Associated with these decorated ceramics of two early styles are smooth, undecorated vessels with the same range of forms, that is, exclusively beakers, bowls and cups. In combination with the decorated vessels they constitute the fine ware for presentation and consumption (Fig. 7).

A single type of pottery is different and not attributable to a local group, but appears to be associated with the geometric dotted Bell Beaker pottery. These are vessels with fingerprint or fingernail deco-

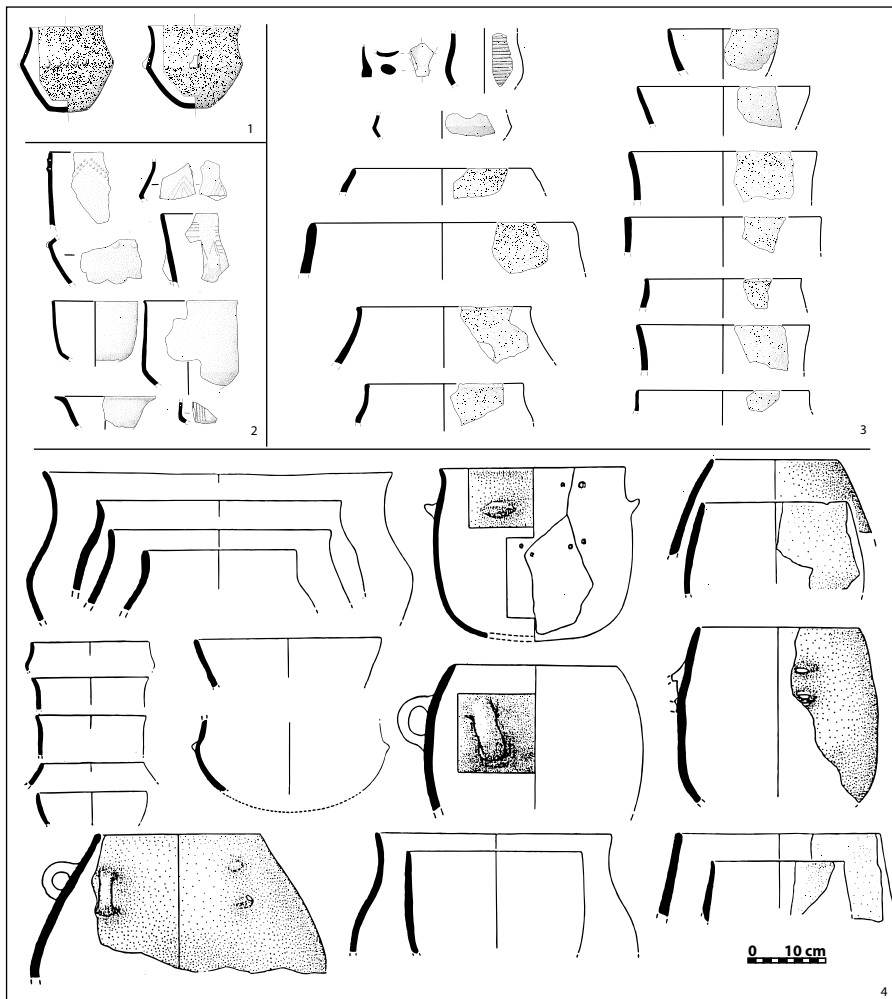


Figure 8. Early Bell Beaker phase: associated local pottery. 1. Forcalquier – La Fare, 2. Les Baux-de-Provence – Escanin 2, 3. Châteauneuf-les-Martigues – Le Fortin du Saut, 4. Orgon – Les Calades (1-3 after Lemerrier 2004b; 4 after Barge-Mahieu 1992).

rations placed regularly or randomly on the body (Fig. 7 n°3-4). In Early Bell Beaker assemblages, the remainder of the pottery consists of vessels that are typical for local Final Neolithic cultures (Fig. 8).

The lithic toolkit shows mainly local or nearby raw material procurement and relatively small modules. Production of small irregular flakes with direct hard percussion or on anvil seems to have been the rule. The tools show limited variability (Fig. 9). The proportion of arrowheads can be significant (leaf shaped and irregular cordiform, lanceolate, and tanged and barbed specimen with a squared barbed variant). The other tools include end-scrapers, splintered pieces and

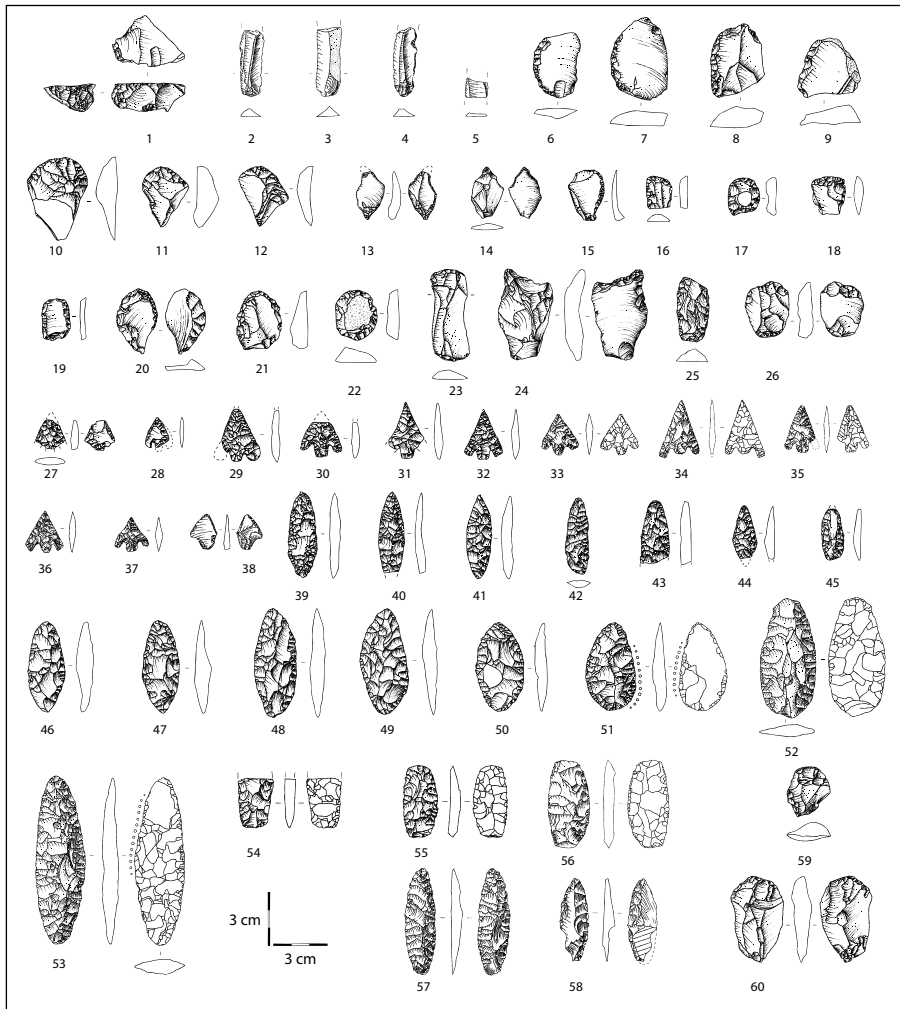


Figure 9. Early Bell Beaker lithic industry. 1: core, 2-5: blades; 6-9: side scrapers; 10-12, 15-23: scrapers; 13, 14, 24: borers; 25: double side scraper; 26, 59, 60: splintered pieces; 27-58: arrowheads. 1, 6-32, 39-53, 59, 60: Orgon – Les Calades; 2-5, 33-38, 54-58: Châteauneuf-les-Martigues – Le Fortin du Saut. (after Furestier 2007).

side-scrapers. This flint industry is relatively well-distinguished from those of local groups at the end of the Neolithic, although they have some elements in common (Furestier 2007; 2008).

Tools made of polished stone and hard animal material are present, but are not very common. They do not significantly differ from those in the other cultures at the end of the regional Neolithic. Metal objects are rare, particularly considering their abundance in regional contexts of the Fontbousse group in eastern Languedoc. In reliable contexts, these are primarily small objects such as square-sectioned awls and various kinds of daggers. Pseudo-Palmela points, known also in the French Midi, can be associated with the early Bell Beakers. Funerary contexts are mainly collective and built and used in the centuries preceding the Bell Beaker phenomenon. This insecure context does not allow us to distinguish which types of ornamentation were associated to this initial phase of the Bell Beaker. Neither are bracers from this phase found in reliable contexts (generally in dolmens).

The early Bell Beaker groups are represented by two different kinds of assemblages.

Most often these are isolated vessels, or in groups of two or three. They come from unspecified domestic contexts attributed to the local Final Neolithic, or more generally from caves or funerary monuments for which the long duration of use and significant reworking prevent clarification of the relationship of the Bell Beaker elements with the other deposits. The existence of strictly self-contained assemblages has been shown by the excavation of burial S14 at Forcalquier – La Fare in the Alpes-de-Haute-Provence, associating a vessel with mixed decoration (comb and cord) and two beakers from the Rhône-Ouvèze group (Lemercier *et al.* 2011). Some sites, however, have very different assemblages. These are Bell Beaker find complexes with a much larger number of decorated vessels, associated with assemblages attributable to the Rhône-Ouvèze or the Fontbousse group. In these assemblages, decorative elements, metal objects and probably part of the lithic toolkit come from a tradition differing from those of local groups. They reflect a real synchrony and are not the result of reworking, as is demonstrated by the fact that “pure” early Bell Beaker sites do not exist, as well as evidencing stylistic and technological transfers between Bell Beaker and local traditions.

Moreover, observation of the ceramic stock at these sites shows that the decorated and undecorated Bell Beaker pottery represents only the fine pottery in these assemblages, in which the common ware pottery is systematically composed of types belonging to local Final Neolithic cultures.

The geographic distribution (Fig. 10) of sites with large assemblages is fairly specific. They are situated in the Mediterranean littoral zone as well as at the mouths and along the principal rivers and their tributaries or along the main circulation routes at the foot of the massifs. This initial series of occupations excludes the inland regions or borders, but isolated Bell Beaker artifacts have been found (one or more vessels generally in funerary contexts). The first Bell Beaker settlements also show a noteworthy topography: small terraces on cliff edges, rocky ridges or rocky peaks protected by sheer drops on all sides. The surface area of these sites is generally quite limited: Châteauneuf-Les-Martigues – Fortin du Saut (Furestier *et al.* 2007), Simiane-Collongue – Col Sainte-Anne (Bocquet *et al.* 1998), Orgon – Les Calades (Barge-Mahieu 1989). These are typically only a few hundred square meters, sometimes less, yielding material from one to four housing units, sometimes associated with annexes. The houses are oval in form and less than 60 m² in area. A small dry stone peripheral wall, the use of natural rock to support the structures and a row of post holes along the main axis of the construction, corresponding to a ridge beam, define the architecture (Lemerrier and Gilibert 2009).

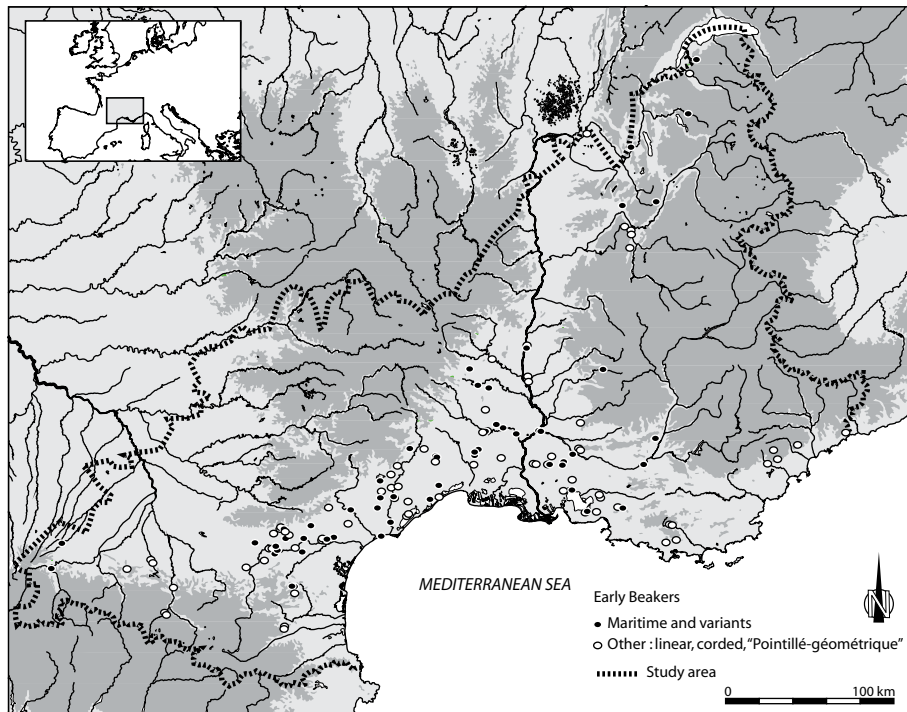


Figure 10. Distribution map of Early Bell Beaker sites in Mediterranean France.

The rare economic data enable nonetheless to consider these initial Bell Beaker settlements as domestic sites in the Neolithic agropastoral tradition. Cereal remains are present, as well as grinding material. The animal economy was recently studied for two sites in this phase (Blaise 2010). This shows that the role of hunting is somewhat more important and diversified in comparison to Final Neolithic regional groups. Present are rabbit, horse, deer, aurochs, bear, fox, ibex, boar, roe deer, beaver, but in small numbers. Most of the fauna is domesticated: cattle, sheep, goat, pig. The horse is present but rare (Blaise 2010).

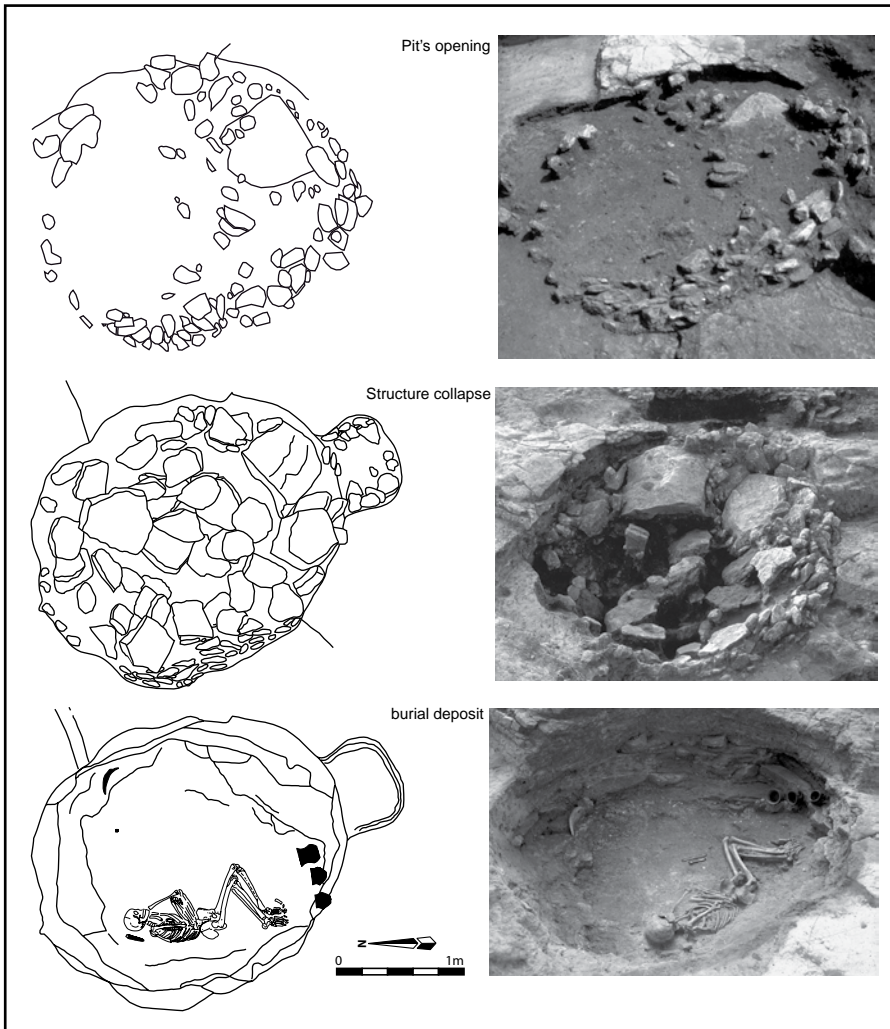


Figure 11. Early Bell Beaker single grave of Forcalquier-La Fare (Alpes-de-Haute-Provence).

Burials with Early Bell Beaker artifacts are for the most part collective burials in dolmens and gallery-tombs. Individual burials are not absent, but quite rare. The only well-preserved example is the burial at Forcalquier –La Fare (Lemerrier *et al.* 2011). This is an ovoid pit 2.5 m in maximum diameter with a probably tumulus-like cover and a complex entry system with a step and a monolithic cover that makes this a mixed monument between hypogeic traditions and tumulus tombs (Fig. 11). It contained the body of an adult male lying on his left side, oriented north-south with the head to the north. Associated artifacts include a Bell Beaker goblet of mixed style, two goblets of local Rhône-Ouvèze style, a copper dagger blade, a bone object in the form of a bobbin and a small segmented bone bead. In Languedoc there are two possible individual burials, one at the site of Alignan-du-Vent – Chemin Dupeyne which contained the remains of a single individual associated with Early Bell Beaker pottery, and the other at Montpellier – Richter where a human femur is associated with a Bell Beaker goblet (Lemerrier and Tchéremissinoff 2011).

Concerning the origin of these initial Bell Beaker elements, similarities can be found most often with material on the Iberian Peninsula, Portugal in particular (Lemerrier 2004a). These include ceramic assemblages with both international and geometric dotted styles as well as fingernail decorations, some ornaments and some metal objects. The extreme rarity of elements that would suggest a northern origin, such as the large AOO and AOC goblets, is noteworthy (Guilaine *et al.* 2001).

The Middle Bell Beaker phase (*Campaniforme Récent*)

The Middle phase of the Bell Beaker in Mediterranean France is marked by the presence of two distinct regional groups which are easily distinguished by their decorated pottery, although they seem to have shared the same common ware. Geographically, the western part of the region from the Pyrenees and the Middle Garonne to central Languedoc was occupied by the Pyrenean group, while the eastern part, from eastern Languedoc to the Alps, was occupied by the Rhodano-Provençal group (Fig. 12).

The Rhodano-Provençal group

The ceramic of the Rhodano-Provençal group is diverse in form and at the same time highly uniform stylistically (Lemerrier 2004b; Lemerrier and Furestier 2009). Three pottery groups can be defined: decorated fine ware, undecorated fine ware, and common ware. The

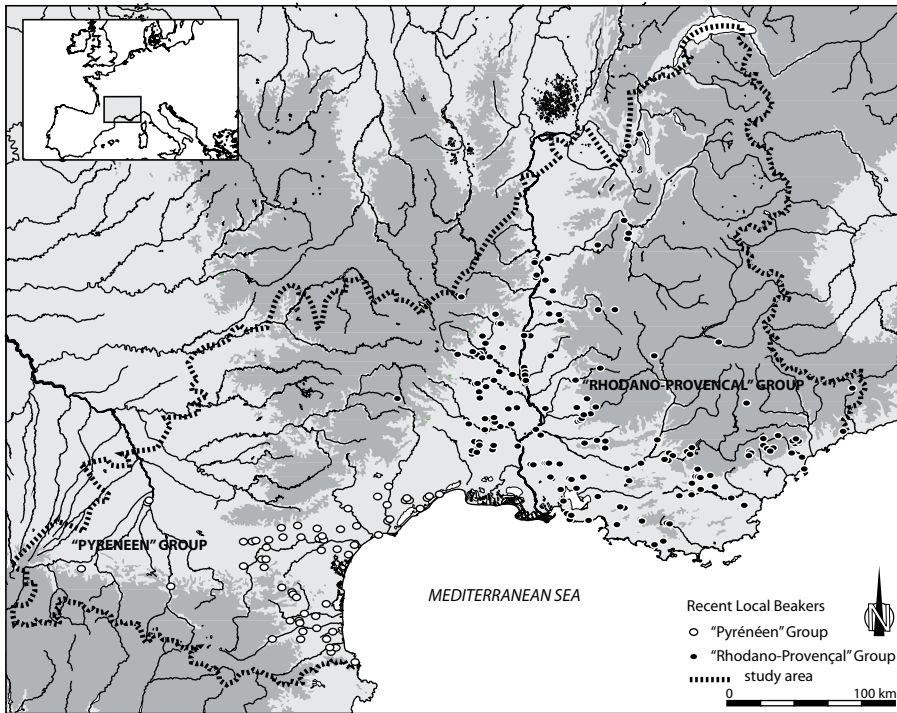


Figure 12. Distribution map of Middle Bell Beaker sites in Mediterranean France.

decorated pottery includes a wide range of forms both tall (goblets, bottles or pseudo-bottles and large pots or handled pitchers) and low (deep bowls, shallow bowls, basins, cups). Techniques for handles are similar, but uncommon (knob-lugs and handles). Decorations are positioned in horizontal rows that can cover the entire vessel or in alternate decorated and undecorated zones. Radiating decorations are clearly present on the low forms. Decorated zones and groups of decorated zones are delimited by incised lines or groups of lines. The recurrent theme is the decorated zone, bordered by incised lines and hatched perpendicularly with short incisions or impressions, creating a ladder motif. The fill of other kinds of zones is formed by generally multiple rows of stamped motifs (most often triangles and lozenges). These rows of motifs, which can be offset, are sometimes reversed, and define a type of decoration that is sometimes considered to be a completely separate style called “pseudo-excised”. Some decorated vessels in this style may also have dotted decoration (Fig. 13-15).

Undecorated fine ware includes goblets, deep and shallow bowls and cups. They are morphologically identical with the decorated vessels. The common ware of the different assemblages of the

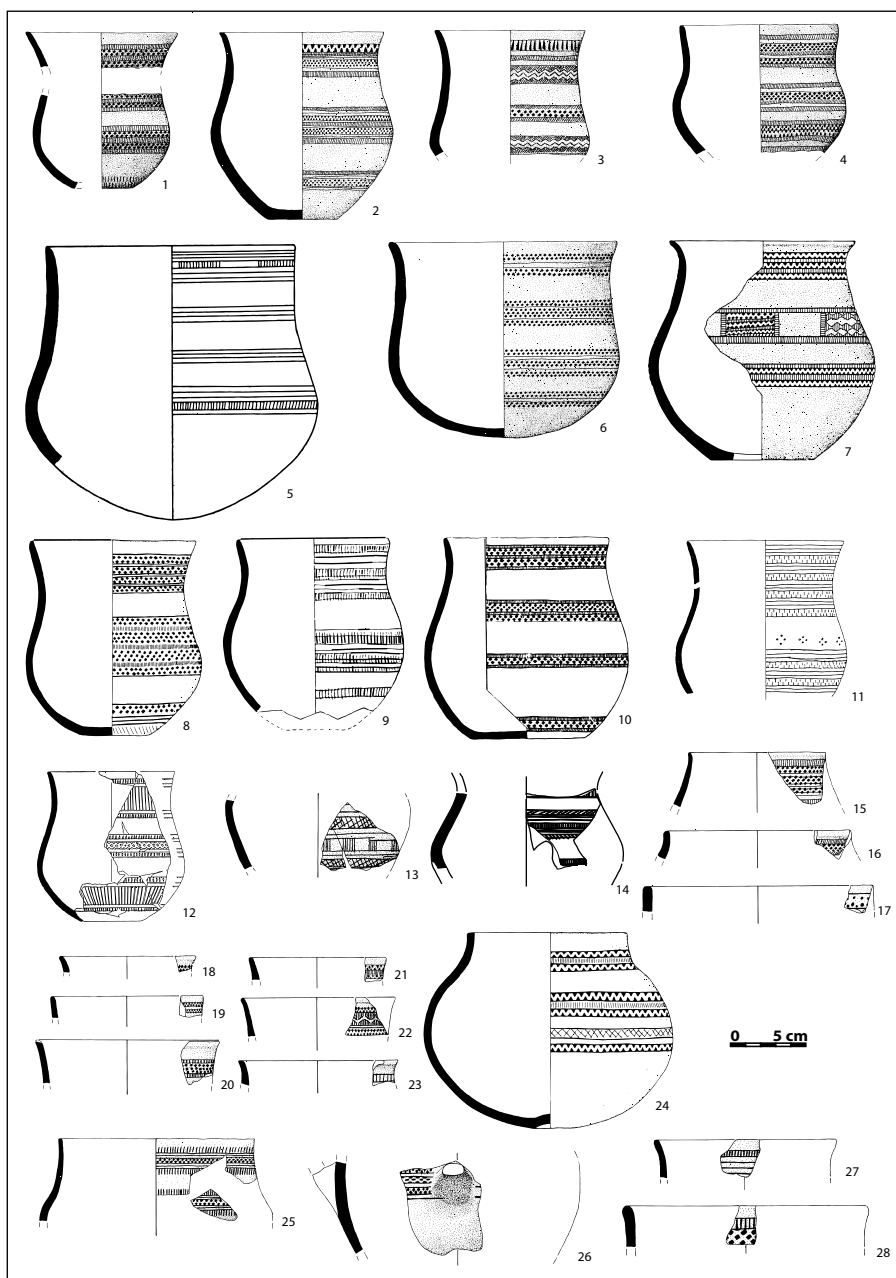


Figure 13. Middle Bell Beaker phase: “Rhodano-Provençal” group pottery. 1, 4, 6. Montpezat – Grotte Murée, 2 and 3. Sainte-Croix-du-Verdon – Abri du Jardin du Capitaine, 5. Gémenos – Grande Baume, 7. Plan de la Tour – Dolmen de San Sebastien, 8 and 24. Francillon – Baume Sourde, 9, 10, 14. Saint-Côme-et-Maruéjols – le Bois Sacré, 11. Sainte-Anastasia – Grotte Nicolas, 12. Donzère – Grotte de la Chauve-Souris, 13, 15-23, 25, 26. Simiane – Col Sainte-Anne, 27-28. Sabran – Le Gardonnet. (1-4, 6, 13-23, 25, 27, 28 after Lemerancier 2004b; 5 after Courtin 1974; 7 after Sauzade et al. 1974; 8, 12, 24 after Bill 1973; 9 and 10 after Roudil et al. 1974; 11 after Guthertz and Hugues 1980).

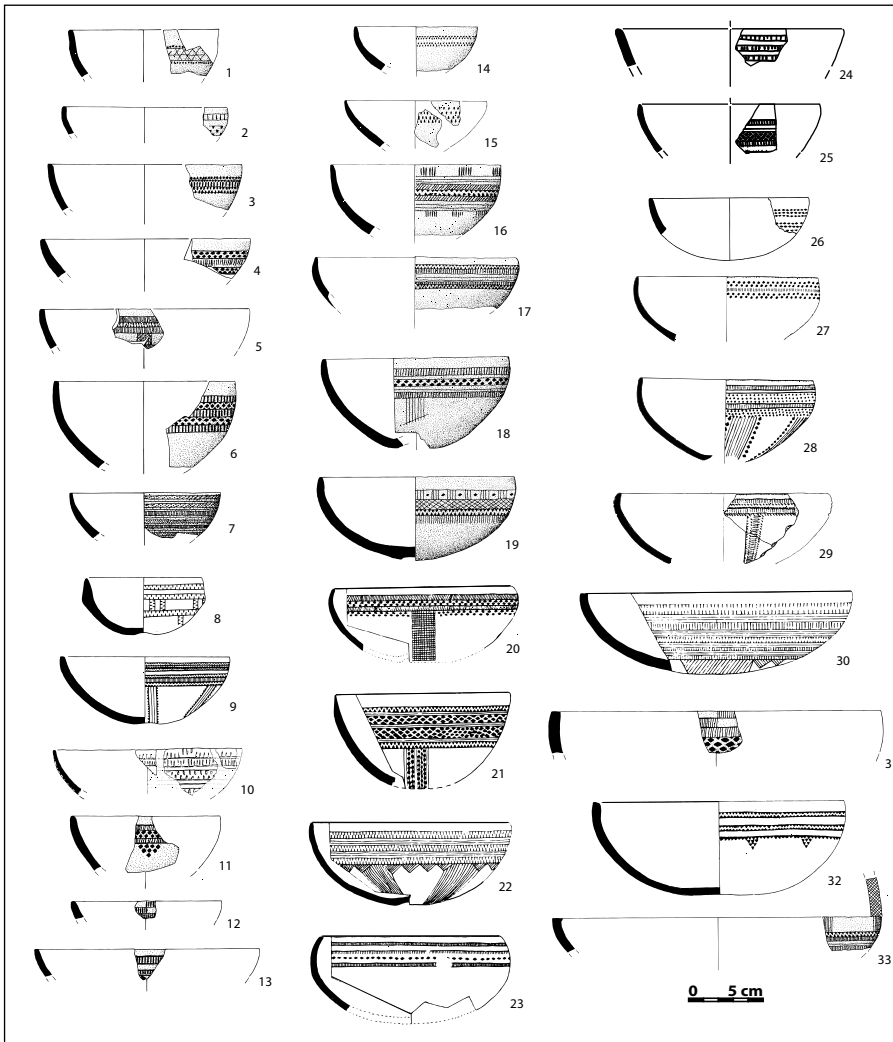


Figure 14. Middle Bell Beaker phase: “Rhodano-Provençal” group pottery. 1-7. Simiane – Col Sainte-Anne, 8, 9, 32. Laroque-sur-Pernes – Abri 2 du Fraischamps, 10. Mondragon – Les Ribauds, 11-13, 31. Sabran – Le Gardonnet, 14, 18, 19, 33. Montpezat – Grotte Murée, 15-17. Sainte-Croix-du-Verdon – Abri du Jardin du Capitaine, 20-24, 25, 30. Saint-Côme-et-Maruéjols – le Bois Sacré, 26. Martigues – Collet-Redon, 27-29. Francillon – Baume Sourde. (1-7, 11-19, 24, 25, 31, 33 after Lemerrier 2004b; 8, 9, 32 after Paccard and Barge-Mahieu 1988; 10 after Margarit et al. 2002; 20-23, 30 after Roudil et al. 1974; 26 after Courtin 1974; 27-29 after Bill 1973).

Rhodano-Provençal group shows notable patterns. Medium-sized vessels are morphologically variable. Open and straight forms are fairly common and continuous profiles seem to be dominant. The rims are frequently flattened and sometimes everted or thickened toward the exterior. Bases are most commonly flat. Handles are rare

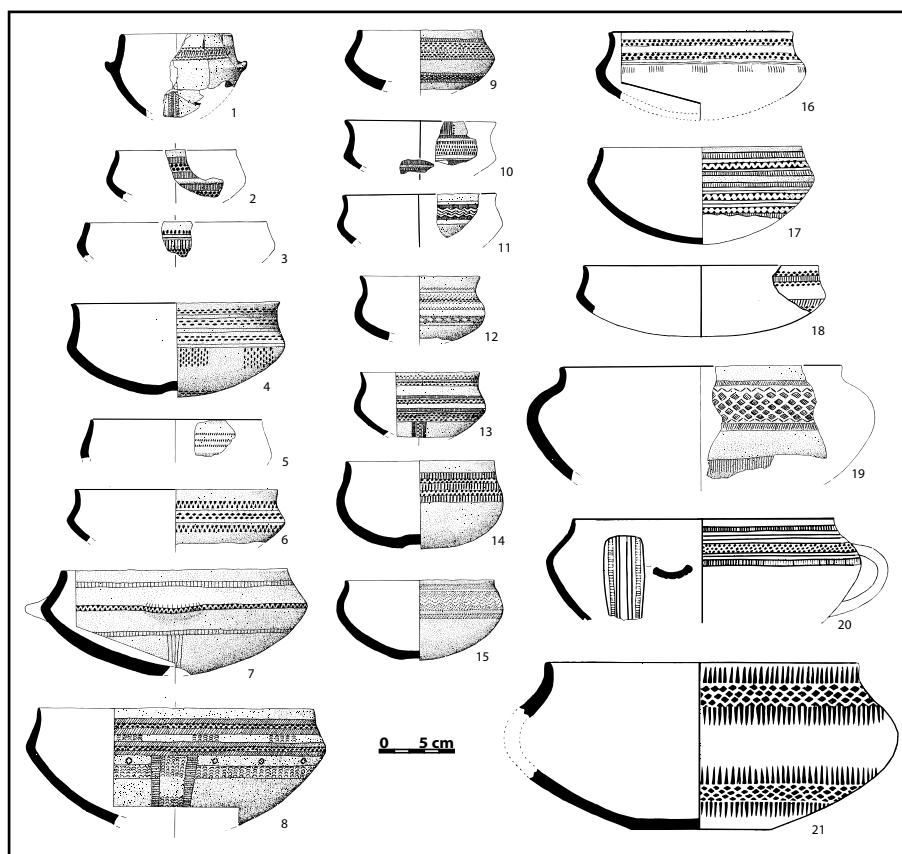


Figure 15. Middle Bell Beaker phase: “Rhodano-Provençal” group pottery. 1. Claix – Sépulture de Comboire, 2, 3, 18. Martigues – Collet-Redon, 5-6, 12-13, 19. Sainte-Croix-du-Verdon – Abri du Jardin du Capitaine, 8. Esparron-de-Verdon – Aven de Vauclare, 4, 7, 9, 10, 14-15. Montpezat – Grotte Murée, 11. Esparron-de-Verdon – Baume de l’eau, 16, 20-21. Saint-Côme-et-Maruéjols – le Bois Sacré, 17. Lourmarin – Les Lauzières. (1 after Picavet 1989; 2-15, 19 after Lemerrier 2004b; 18 after Courtin 1974; 16, 20, 21 after Roudil et al. 1974; 17 after Courtin et al. 1985).

(knob-lugs and bumps). Large containers can be divided in several morphological groups. Fragments of flat bases of large diameters demonstrate the existence of large jars, although round bases are probably also present. The rims are most often flattened and sometimes thickened toward the exterior. Forms are fairly straight. Most of the complexes consist of medium-sized jars with a cordon in just below or directly attached to the rim. These cordons are generally triangular in section and smooth. Jars with rows of perforations just under the rim, associated with a cordon of triangular section are fairly common (Fig. 16).

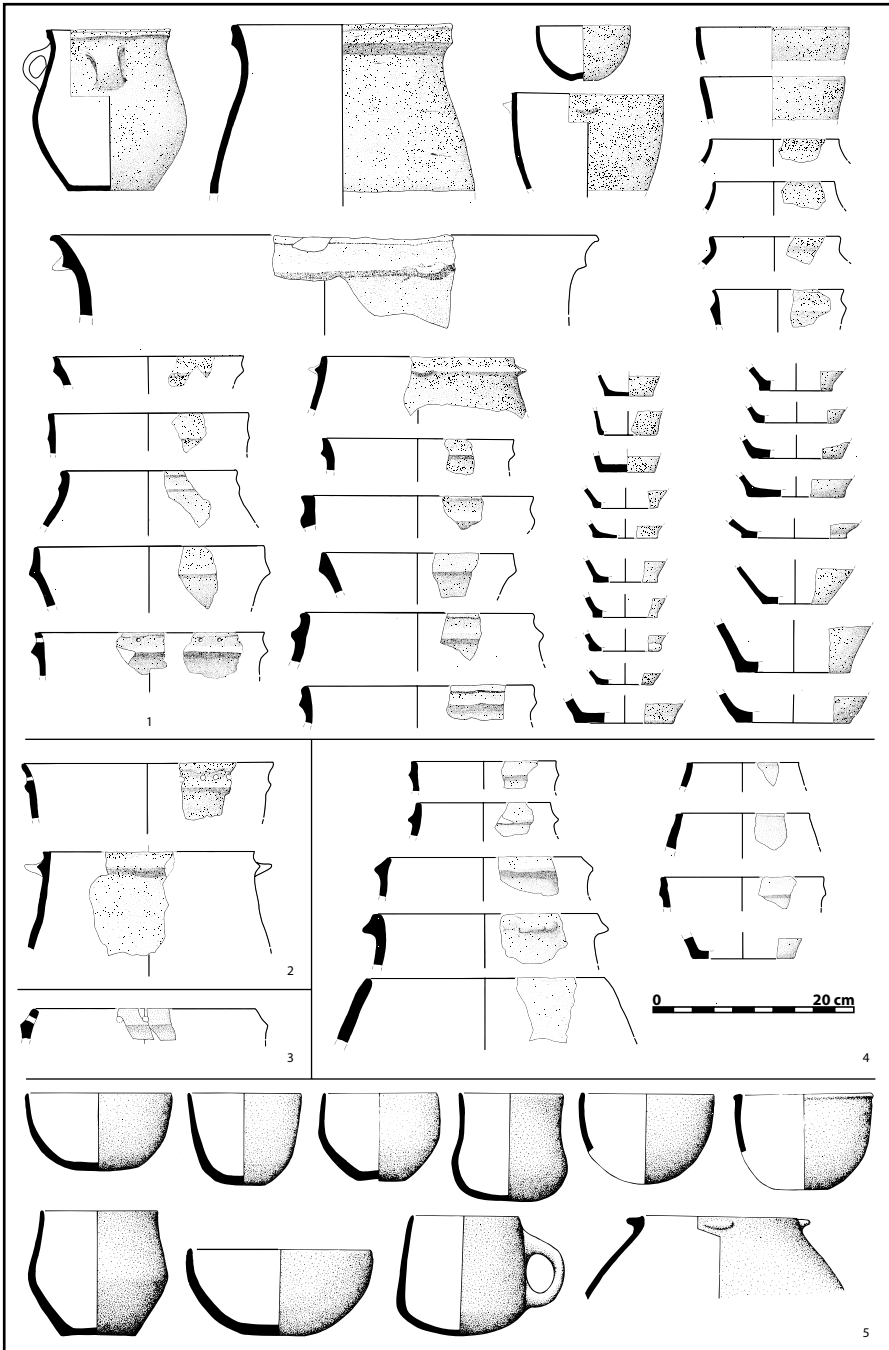


Figure 16. Middle Bell Beaker phase: “Rodano-Provençal” group domestic pottery. 1. Montpezat – Grotte Murée, 2. Esparron-de-Verdon – Aven de Vaclare, 3. Sabran – Le Gardonnet, 4. Sainte-Croix-du-Verdon – Abri du Jardin du Capitaine, 5. Saint-Côme-et-Maruéjols – Bois Sacré. (1-4 Lemerrier 2004b; 5 after Roudil, Bazile, and Soulier in Guilaine 1989).

The lithic industry of the Rhodano-Provençal group shows marked links to the technological traditions of the local Final Neolithic cultures. Raw material procurement is primarily local, resulting in significant variability in flint quality. The size of these blocks, cobbles or flakes appears to be standard (rarely more than 10 cm). Used as cores, these were knapped by direct hard percussion or on anvil in order to produce a maximum of small flakes. One can see continuity in the dominance of splintered pieces and end-scrapers (often thumb-nail scrapers) in the domestic toolkit, reintegration of products of local Final Neolithic specialists such as large blades and daggers, and the appearance of new tools (microlith crescents and microdenticulates). Arrowheads are less common and the tanged and squared barbed type is no longer present (Furestier 2007; 2008). Copper tools from reliable Rhodano-Provençal context are very rare, but include short double-ended awls of square cross-section. Daggers are almost absent (Fig. 17).

Regarding ornamentation, V-perforated bone buttons and roughly arciform undecorated pendants are found alongside all of the types of ornamentation present at the end of the Neolithic. Bracers, generally of stone (limestone, sandstone), are well represented.

The centre of gravity of sites attributable to the Rhodano-Provençal group appears to be found in the lower Rhône Valley. With around 140 sites currently inventoried and concentrated on the immediate borders of the Rhône Valley and extending to interior Provence, this stylistic group clearly justifies the name “Rhodano-Provençal group”.

With respect to settlement: while a third of the domestic sites are found in caves, most are open-air sites both on the plains and hill top settlements. No enclosures seem to have been constructed at this time. The architecture of houses remains poorly known, but is diversified by sector. In the Rhône Valley we find prepared surfaces, in eastern Languedoc stone paving of elongated oval form some ten meters long, and in the middle Rhône Valley architecture with wooden posts (Lemerrier and Gilibert 2009).

Although economic data has not been specifically studied, evidence shows an agro-pastoral society that does not significantly differ from the regional Final Neolithic cultures. Nothing suggests that the people of the Bell Beaker Culture were a population or group specialised in a specific kind of activity. The only recurrent data concerning the animal economy indicates that hunting was slightly more diverse than for local Final Neolithic groups (Blaise 2010). In general procurement territories appear to have been fairly limited to the vicinity of the settlement (flint, rock for polishing, clay, *etc.*). This pattern follows a refocusing that starts with the beginning of

the Final Neolithic. However, some artifacts of regional or extra-regional provenance have also been documented.

The 38 burials or funerary ensembles known reflect a strong tradition (Lemerrier and Tchérémissinoff 2011). Collective burials dominate (caves and rock shelters, hypogaea, dolmens, block tombs) and were frequently reused from the start of the 3rd millennium BC onwards. The only exception is an individual burial in settlement context at Montpezat – Grotte Murée, but this is a child's burial (Courtin *et al.* 2011).

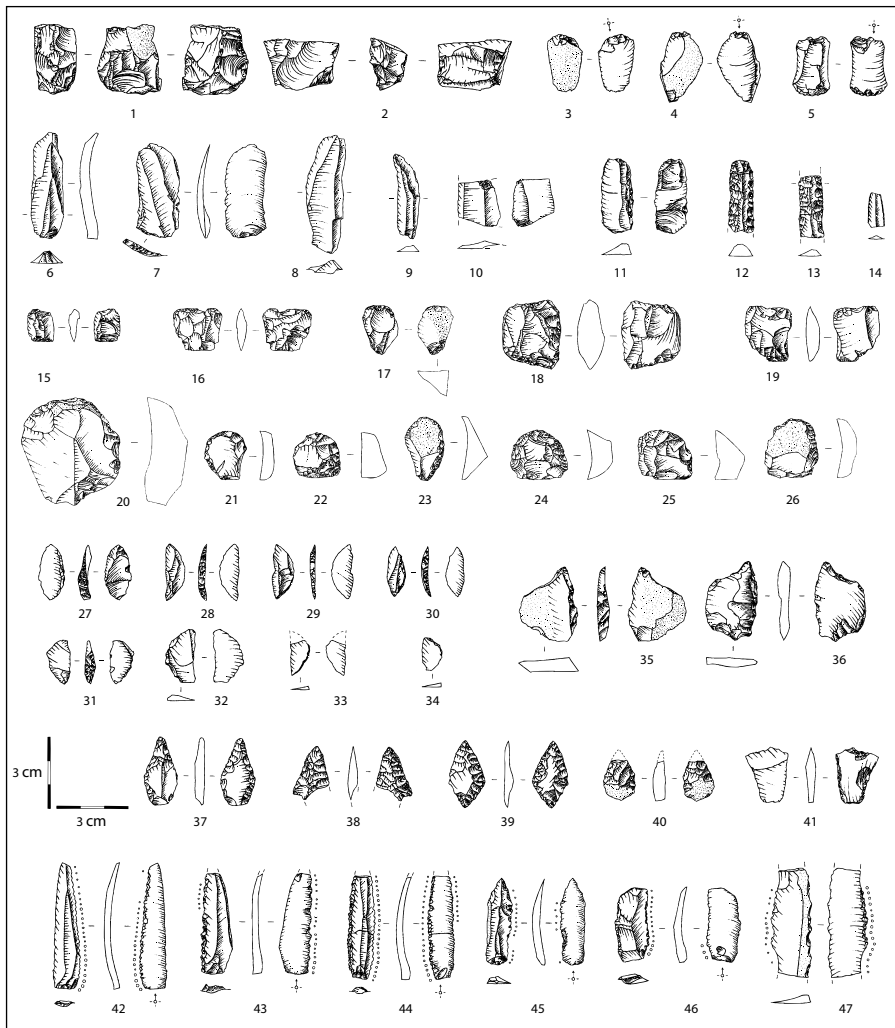


Figure 17. Middle Bell Beaker lithic industry. 1-2: cores; 3-5: flakes; 6-14: blades and bladelets; 15-19: splintered pieces; 20-26: scrapers; 27-34: microlith crescents; 35-36: borers; 37-41: arrowheads; 42-47: microdenticulates. 1-47. Nîmes – Mas de Vignoles IV (after Furestier 2007).

The Pyrenean group

The decorated ceramics of the Pyrenean group are very similar to those of the Rhodano-Provençal group, but have some unique characteristics in its decorative techniques. Incisions, impressions and dotting are still quite common, which can lead to confusion with objects belonging to the early phase of the geometric dotted style. Characteristic are also *fermeture éclair* (zipper) motifs and arrange-

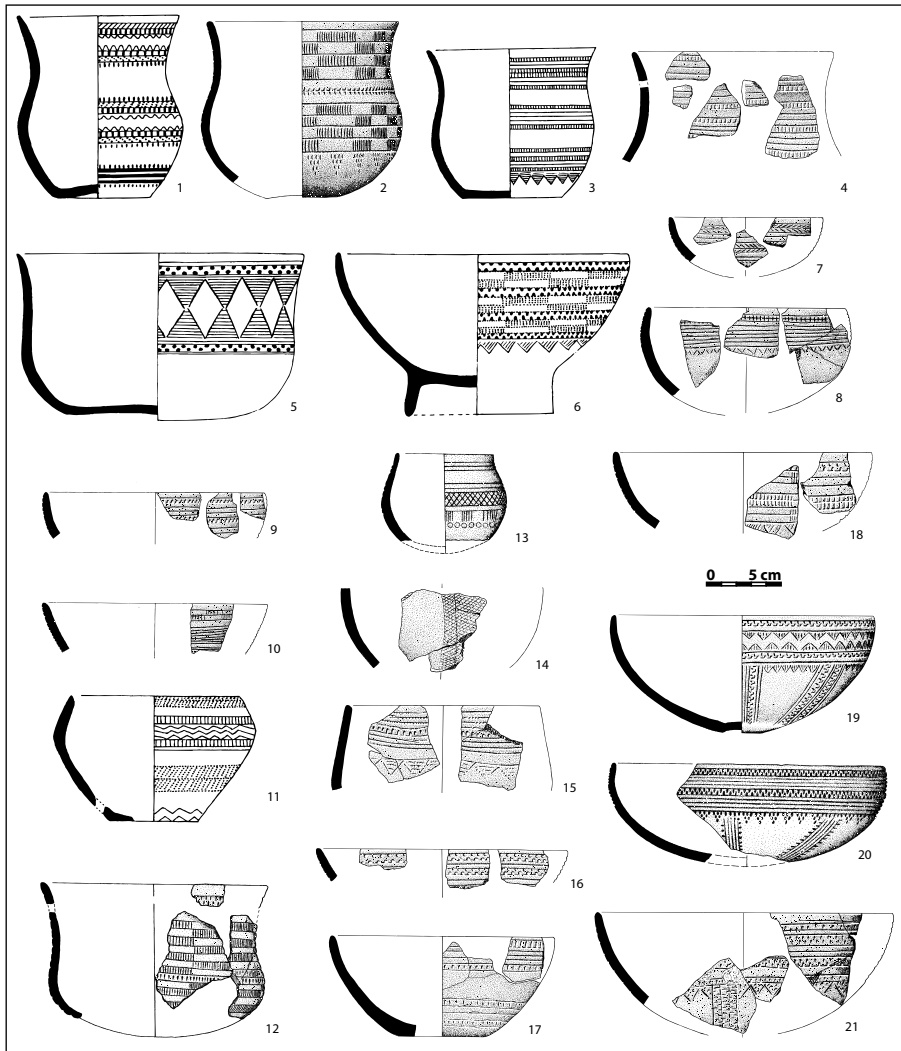


Figure 18. Middle Bell Beaker phase: “Pyrenean group” pottery. 1. Greffeil – Grotte des Charbonniers, 2, 4, 7, 8, 9, 10, 14-17-19, 21. Ornaisons – Médor, 3 and 5. Laure-Minervois – Dolmen de Saint-Eugène, 6. Armissan – Grotte du Pas du Noyer, 11. Mailhac – Embusco, 12. Fleury d’Aude – Petite Grotte de la Ganive, 13. Cessenon – Vialat, 20. Colombers. (1, 3, 5, 6, 11 after Guilaine et al. 2001; 2, 4, 7, 8, 9, 10, 14-17-19, 21 after Guilaine et al. 1989; 6, 12, 13 after Ambert 2003).

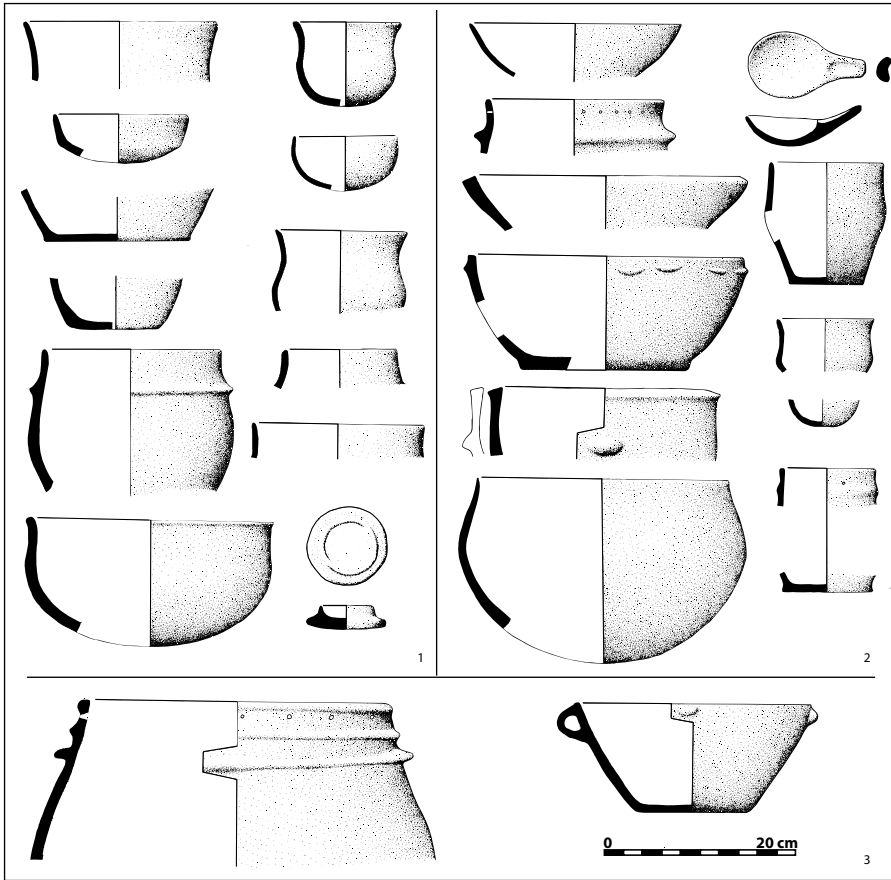


Figure 19. Middle Bell Beakers: “Pyrenean” group domestic pottery. 1. Ornaisons – Médor, 2. Muret – La Peyrière, 3. Conques-sur-Orbiel – Abri de Font Juvénal. (1 and 3 after Guilaine *et al.* 1989; 2 after Jolibert in Guilaine *et al.* 1989).

ments in metopes or checker-board pattern (Fig. 18; Guilaine *et al.* 2001). Undecorated pottery is represented by the same principal types as those of the Rhodano-Provençal group (Fig. 19).

Like the ornaments, the lithic industries of the Pyrenean group has not yet been studied in detail. At the site of Muret – La Peyrière (Jolibert 1988) in the extreme west of the geographic zone of the Pyrenean group, tools are predominantly small sub-circular end-scrapers made on flint flakes. The presence of rare notches, borers, objects made on blades, and bladelets has been reported. A tanged and barbed arrowhead and six microlith crescents complete the assemblage.

The geographic distribution of the Pyrenean group is concentrated on the Gulf of Lion between the Pyrenean massif and the mouth of the Hérault. At present, the known sites are concentrated

along the coast and more so along rivers and the large communication routes, particularly the length of the Aude Valley, extending to the Garonne Basin in the region of Toulouse. Of the 63 definitively attributed sites, 31 are settlements or domestic and 26 are burials.

Settlements of the Pyrenean group remain poorly known, established at open-air sites and very rarely in caves. Constructions are unknown.

The 26 burials, which are uniformly distributed over the region under consideration, are mostly collective burials in megalithic structures or in caves (Lemerrier and Tchérémissinoff 2011).

The best comparisons for the decorated pottery come once again from the Iberian Peninsula, but rather in Spain with the Ciempozuelos group (Garrido Pena 2000) for which some forms are identical to objects in the Rhodano-Provençal group (Lemerrier 2003*b*). Some objects suggest other contacts, for instance microlith crescents point to contacts with Italy, while certain ceramic forms resemble forms in central or northern Europe. Domestic pottery seems to have been shared with other recent Bell Beaker groups across a large geographic area: in central Italy, Switzerland, the Rhône-Saône corridor to Normandy and along the Atlantic coast (Besse 2003; Leonini 2003).

The Late Bell Beaker phase (*Campaniforme Tardif*)

In the late phase, the decorated pottery shows on the one hand a Bell Beaker tradition in the structure of the decoration, and on the other new characteristics in the decorative techniques and morphology. Decorations are incised or made with a barbed wire stamp, sometimes both on the same vessel (Lemerrier 2004*b*). While incision is well-known in preceding Bell Beaker decorative styles, barbed wire decoration is entirely specific to this period since it was made with a previously unknown technique using a threaded comb or stamp. Decorative themes include lines and bands of lines, sometimes curved to avoid a grasping element. Patterns of different kinds of chevrons are well-represented, as well as patterns of geometric bands and motifs with square and cross patterns rather than hatched. In some cases, stamped lines of motifs can be associated with these. The general organisation of the decorations is still dominated by the repetition of horizontal decorated zones often separated by empty zones in the Bell Beaker tradition. However, structuring in large square or rectangular panels, on some vessels limited by handles, is recurrent (Fig. 20).

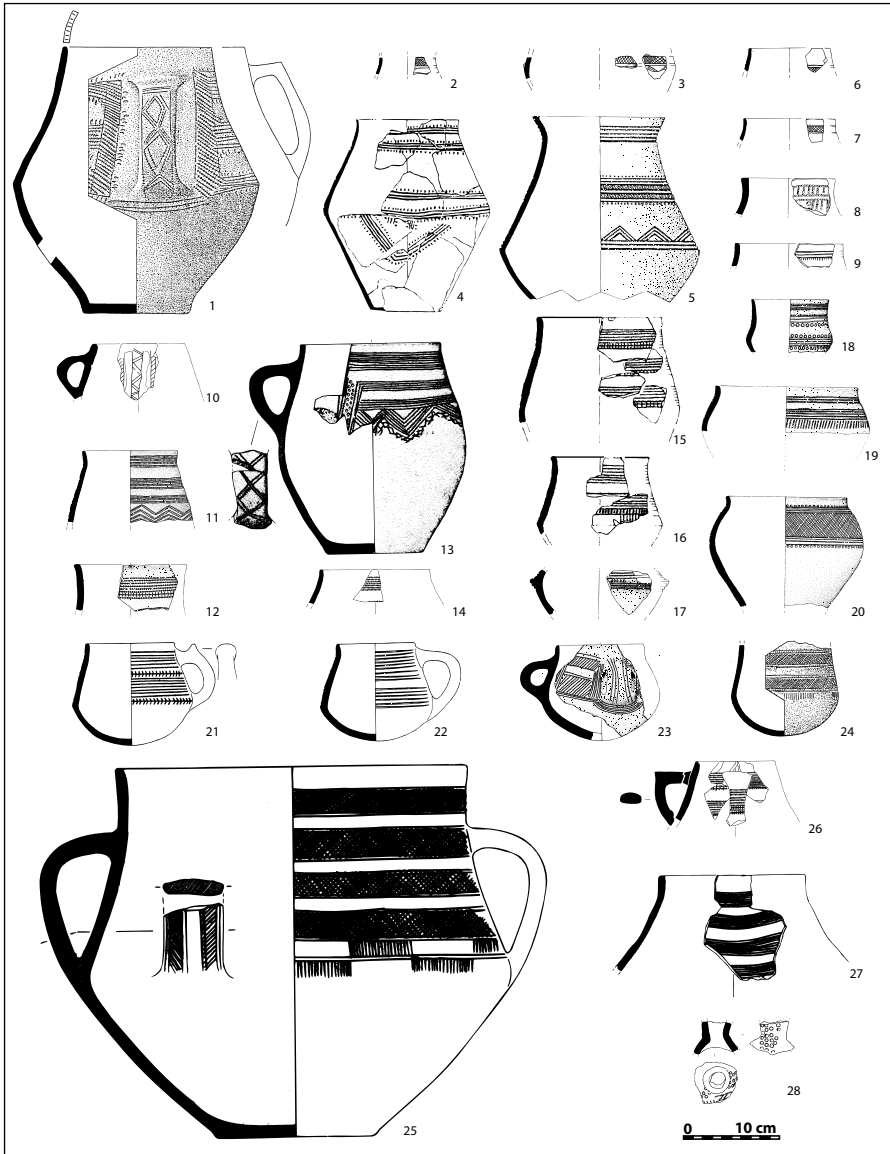


Figure 20. Late Bell Beaker phase: Barbed Wire pottery. 1 and 24. Aix-en-Provence – Clos Marie Louise, 2, 3, 6, 7. Le Beaucet – La Rouyère, 4. Saint-Jean-de-Maruéjols-et-Avéjan – Aven Roger, 5. Saint-Laurent-sous-Coiron – Aven des Cotes de Loup, 8, 9, 17, 28. Nîmes – Georges Besse II, 10. Istres – Miouvin, 11. Lourmarin – Les Lauzières, 12, 13, 15, 16, 23, 25, 27. Le Rove – Camp de Laure, 21 and 22. Allauch – Aven de Gages, 14 and 26. Martigues – Le Collet-Redon. (1 and 24 after Vignaud 2002; 2, 3, 6, 7 after Buisson-Catil and Vital 2002; 4 after Jallot et al. 1996; 5 after Roudil 1993; 8, 9, 17, 28 after Escallon et al. 2008; 10, 14, 26 after Lemerrier 2004b; 11 after Courtin et al. 1985; 12, 13, 23, 25, 27 after Courtin 1978; 15 and 16 after Vital 2000; 21 and 22 after Courtin 1976).

The best represented forms include goblets with a generally flat base, but for which the S-profile is less curved or conversely much more segmented than during the preceding Bell Beaker phase. Some of these barrel-shaped, biconical or S-profile vessels have a single handle and are considered to be large pitchers. Smaller forms with a single handle and a simple or segmented profile and round base would be cups. The common ware pottery reflects a strong Bell Beaker tradition. Vessels have a flat base and include simple and

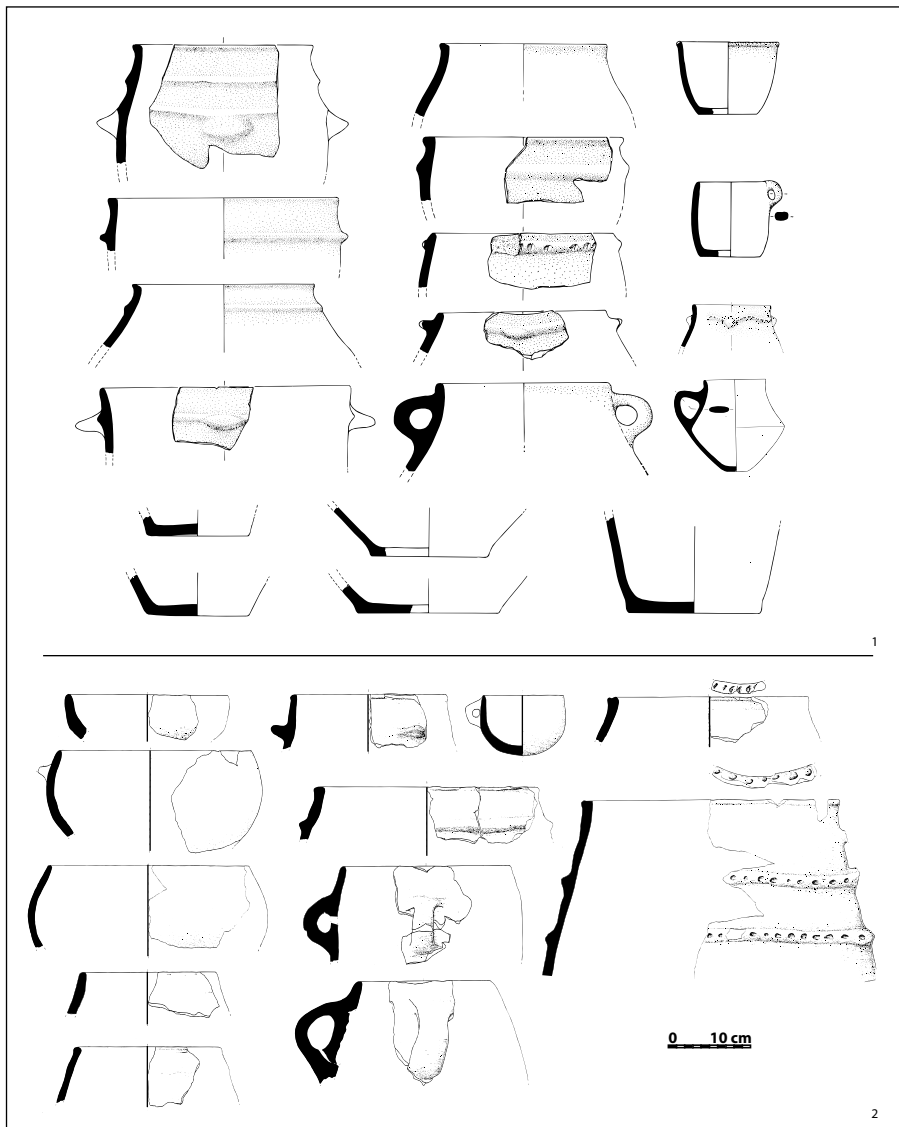


Figure 21. Late Bell Beakers: Barbed Wire domestic undecorated pottery. 1: Le Rove – Le Camp de Laure; 2: Aix-en-Provence – Clos Marie Louise. (1 after Courtin 1976; 1978; 2 after Leonini 2003).

rounded forms, sometimes have handles. Cylindrical and barrel-shaped jars of different size may have one or two cordons just below the rim. Smooth cordons are more common, but those with fingerprint impressions are also present (Fig. 21).

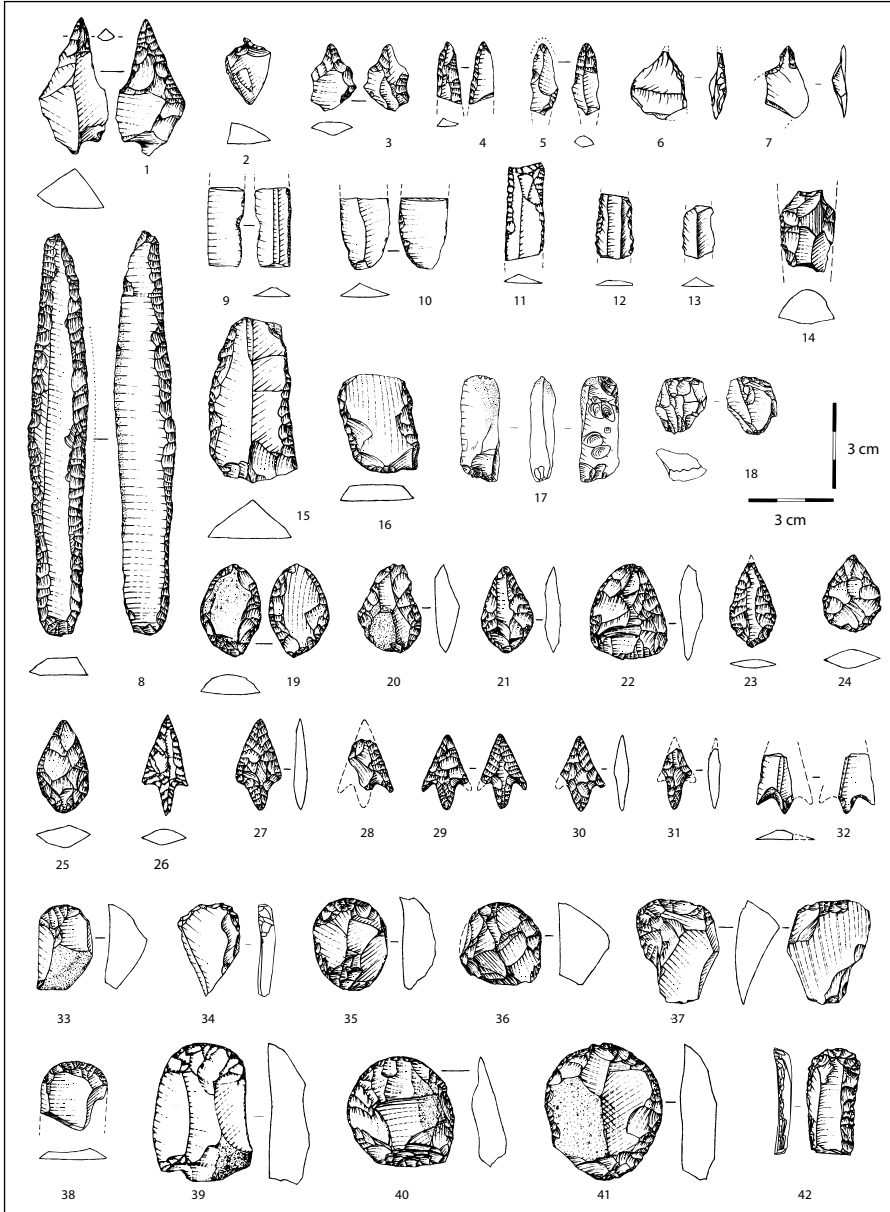


Figure 22. Late Bell Beaker lithic industry ("Barbed Wire pottery" group) y. 1-7: borers; 8-14: blades and bladelets; 15-16: side scrapers; 17-18: splintered pieces; 19-32: arrowheads; 33-42: scrapers. 1-42. Le Rove – Camp de Laure (after Furestier 2007).

The lithic industry confirms this strong Bell Beaker tradition (Furestier 2007). Raw material procurement, flake production and tool types remain comparable to those observed for the Rhodano-Provençal group. The toolkit is still dominated by end-scrapers and side-scrapers, foliate, tanged and barbed arrowheads, as well as splintered pieces (Fig. 22).

It is more difficult to describe the other industries. Only the presence of extremely rare and small bronze rhomboid-shaped awls seem to be truly characteristic.

In Mediterranean France, Epi-Bell Beaker sites are concentrated mainly in the lower basin of the Rhône (Fig. 23), although sites are occasionally known from the Pyrenees to the Alps. Their distribution falls outside the geographic scope of this study with a notable extension into the Lyon region, to Ain and Saône-et-Loire, but also in Auvergne. In the study region, 102 sites have yielded Late Bell Beaker elements. 62 sites are settlements or domestic occupations, of which four have included one or more burials, and only 19 are specifically funerary (the remaining sites mainly represented by isolated discoveries in caves). Occupation of caves and rock shelters has become very rare. Some sites show an obvious organisa-

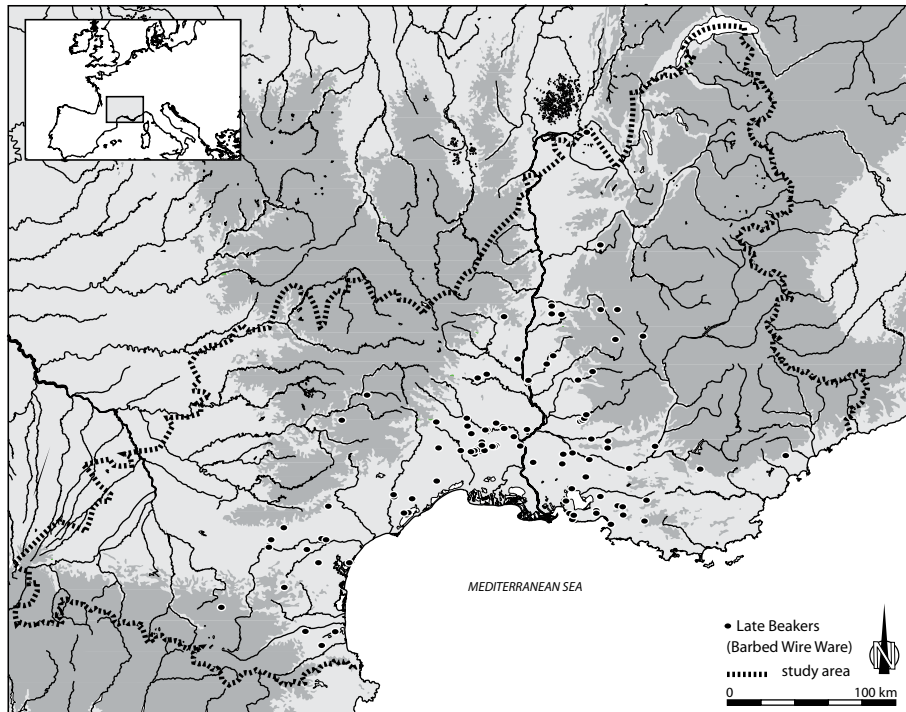


Figure 23. Distribution map of Late Bell Beaker sites ("Barbed Wire pottery" group) in Mediterranean France.

tion: Mondragon – Les Juilleras (Lemerrier 2002), but architecture remains unknown (Lemerrier and Gilabert 2009). As during the first phase there is a strong tendency for perched sites. Some Final Neolithic perched sites with enclosure systems were reoccupied during this period, but the original aspect of this period lies in the organisation of new enclosed or fortified sites: Le Rove – Camp de Laure (Courtin 1975). Burials are fairly diverse, but especially show the true development of individual burials, and probably of small cemeteries (Lemerrier and Tchérémissinoff 2011).

Ceramic forms reflect both a Bell Beaker tradition for part of the common ware and an Italian origin with forms well-known in central Italy: Sesto Fiorentino Sites (Sarti 1997; Sarti and Martini 2000) and northern Italy. Barbed wire decoration is probably to be found in the northwest Balkans in Slovenia. The combination of these two elements may have taken place in northern Italy where vessels with barbed wire decoration are known: Villanuova sul Clisi – Monte Covolo (Poggiani Keller and Baioni 2008).

Model and interpretation

The hypothesis proposed here (Fig. 24), of the “explorations, establishment, diffusion, colonisation and acculturation” type, is similar to models developed for the recent protohistoric period in the same regions, such as that proposed by A. Nickels for Greek settlement in Languedoc (Nickels 1983).

His model proposes three phases. The first is the “exploration phase” and concerns the initial contacts between the Greeks and local populations. It is marked by the presence, in some tombs, of imported vases. These are rare and belong almost exclusively to the class of drinking vessels. Such objects would have been given as gifts during episodic contacts linked to coastal exploration by Greek navigators. The second phase corresponds to regular contacts, an intensification of trade and settlement attempts. It is later than the founding of Marseille by the Phocians in the neighbouring region. This phase is first marked by an increase in Greek objects and imports, and by a change in the kinds of objects since amphorae appear in quantity, reflecting economic changes. The creation of workshops for the production of monochrome gray pottery in Languedoc is of particular interest to Nickels. And, indeed, in less than a quarter of a century this type of pottery would come to represent 80% of the fine pottery on all the coastal sites and many interior sites. For this period, archaeologists assume the absence of Greek colonies in this region, neither are there written sources to that effect. To explain the role of these workshops, Nickels discusses several hypotheses, concluding with the hypothesis (Nickels 1983, 418): “*a permanent*

Protohistoric Model	Iron Age Evidences	Final Neolithic/Beakers Evidences	Interpretations
Phase 3: Settlements Cohabitation / Acculturation High exchange intensification	New culture "Massaliètes" Settlements Mixed necropolis Imported objects of several areas	Recent Beakers Numerous New Beakers settlements dying out indigenous cultures Complete material culture style related to Iberic Peninsula Imported objects of several areas	Acculturation of indigenous cultures High connection with Iberic Peninsula Exchange with several regions
Phase 2: Regular contacts Exchange/trade intensification First settlements	Transport containers local vessel production (and diffusion)	Early Beakers Beakers drinking vessel in indigenous burials Mixed settlements	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; width: 45%;"> 1 Exploration and first beakers settlements Relations with indigenous vessel diffusion inside of lands </div> <div style="border: 1px solid black; padding: 5px; width: 45%;"> 2 Installation and cohabitation phase </div> </div>
Phase 1: Exploration First Contacts Gifts/Presents	Imported drinking vessels in indigenous burials	Transfer of technology Local vessel production	<div style="border: 1px solid black; padding: 5px; width: 45%;"> 1 Exploration and first beakers settlements Relations with indigenous vessel diffusion inside of lands </div> <div style="border: 1px solid black; padding: 5px; width: 45%;"> 2 Exploration and objects diffusion phase </div>

Figure 24. Greek model and interpretation of Beaker data.

settlement of a small group of Phocians within – or next to – a local community [...], the hypothesis that best fits archaeological observations.” This phase also includes attempts to penetrate the hinterlands. The third phase of this interpretation is that of the Massalia control over Languedoc which sees the creation of a Massaliot establishment (Agde). The post had a military function, but the necropolis linked to it shows the presence of different rites corresponding to different populations “which implies [...] the cohabitation in the post itself of the same elements of different origins [...] as Ampurias, another Phocian colony where the cohabitation of indigenous peoples and Greeks is attested.” (Nickels 1983, 423) This period is also marked by intensification of trade. Imported Greek objects are very common, but at the same time specifically Massaliot production develops, which, however, come up against fierce competition by Ibero-Punic products that pass through Ampurias.

My aim is not to use this model as a direct parallel for the Bell Beaker phenomenon. In essence it is simply another archaeological interpretation for another period likely governed by economic and social conditions that were at least in part different from those at the end of the Neolithic. Such historical interpretations can be advanced for the Greeks in Languedoc only when supported by information obtained from written sources. It is, however, interesting to note the broad similarity in the observed archaeological data and the coherence of the interpretations that can be made.

We would thus have an initial phase, with the early Bell Beaker people undertaking maritime exploration, with the first establishments along the coast and the principal rivers going into the continent. These occupations immediately evidence contact, or even very rapid coexistence, with local populations at perched, naturally defensible, sites. In parallel, the spread of Bell Beaker goblets toward the interior can be observed, acquired by locals who carried them to their graves. Mediterranean France was thus in a relay position along axes of diffusion that extended both toward the high Rhône Valley, the Saône, Switzerland, *etc.*, and toward Italy (Lemerrier *et al.* 2007).

The second phase corresponds to the acculturation of local populations in which cultural groups tended to disappear with the development of regional groups of the Recent Bell Beaker period. Sites of all types develop in number and across the entire territory. Contacts with the Iberian Peninsula were probably very important, but Mediterranean France also received objects/individuals from other Bell Beaker regions in Europe.

The third phase, with the development of the Late Bell Beaker, is not comparable with this first model, but involves a new influx, now from the east with a new phase of hill top sites and the appearance of fortifications. Bell Beaker traditions disappear between 1900 and 1800 BC, when another Rhodanian cultural entity is established and bronze objects are massively diffused.

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