

# Richness and diversity of burial rituals in the Gravettian period: Potential for clothing reconstructions in documentaries

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## Zusammenfassung

**Reichtum und Vielfalt gravettienzeitlicher Bestattungsrituale: ihr Potenzial für Kleidungsrekonstruktionen in Dokumentarfilmen**

*Gräber aus dem Gravettien Europas (Mittleres Jungpaläolithikum vor ~34 000 bis 24 000 Jahren) bieten das größte Potenzial für die Rekonstruktion der Kleidung des Jungpaläolithikums. Die Beigaben, die an Körpern in Primärbestattungen (Einzel- oder Mehrfachbestattungen) gefunden wurden, geben einen Eindruck von den regionalen ›Moden‹ oder Traditionen dieser Zeit und von der Vielfalt gravettienzeitlicher Kleidungsstile. Trotz aller Probleme, die an Fragen zur Bekleidung anknüpfen, wenn organische Materialien längst vergangen sind, werden die Daten, die der Reichtum dieser Bestattungen liefert, bei der Rekonstruktion von Menschen in medialen Darstellungen der Vorgeschichte, insbesondere in Dokumentarfilmen, zu wenig genutzt.*

*Die Erstautorin dieses Beitrags, die bei dem 2021 gedrehten Film Ladies and Princes of Prehistory für den Fernsehsender Arte (produziert von Enfant Sauvage) Regie geführt hat, wollte diese archäologischen Daten nutzen, um Kostüme für die Reenactment-Szenen des Dokumentarfilms zu erstellen. In diesem Artikel gehen wir auf die Probleme ein, denen wir begegneten, und erläutern die Grundlagen unserer Entscheidungen zur Kostümgestaltung.*

**Schlagwörter** Gravettien, Bestattungen, Ornamente, Reenactment, Dokumentarfilme

## Introduction

In Europe, a total of 81 individuals were found in graves that date into the Mid-Upper Palaeolithic (MUP) or Gravettian period, between -34 and 24 kya. These stem from 24 archaeological sites dispersed across 15 regions (Fig. 1). A total of 68 individuals were associated with adornment<sup>1</sup>. These burials form a very heterogeneous corpus in terms of preservation and potential use for reconstruction. 24 have excellent or good preservation, and eleven others have known, albeit imprecise, information, while for 33 on the other hand, the data is very poorly known or documented,

## Summary

*European Gravettian burials (dating to the Mid-Upper Palaeolithic ~34 000 to 24 000 years ago) offer the greatest potential for reconstructing Upper Palaeolithic clothing. The finery found on bodies in primary burials (individual or multiple) gives an idea of the regional ›fashions‹ or traditions of the time and the diversity of clothing styles in the Gravettian period. Despite all the problems posed by the question of clothing whose organic materials have long since disappeared, the data provided by the wealth of these burials are under-utilised in the reconstruction of humans in media presentations of prehistory, particularly in documentaries.*

*The first author, who directed the 2021 film, Ladies and Princes of Prehistory for the Arte TV channel (produced by Enfant Sauvage), wanted to use these archaeological data to commission costumes for the documentary's re-enactment scenes. Here, we look at the problems encountered and the basis on which choices were made.*

**Keywords** Gravettian, burials, adornment, re-enactment, documentaries

and sometimes the information is virtually lost (Předmosti, Přerov District [Czech Republic] and La Rochette, Dép. Dordogne [France]) or not yet known (Cussac, Dép. Dordogne [France]; Coste in prep.).

Although not all are well-dated, the burials seem to cover the entire Gravettian period, with major regional differences. Some may date back to a slightly earlier period, such as in the case of the Sunghir burials, Vladimir Oblast, in Russia, or some of the Balzi Rossi, for example those from Baouso da Torre, both Liguria (BT1, BT2, BT3) in Italy (Fig. 2).

According to the amount of adornment, some of the burials are considered ›rich‹, and in a way, raise the question of

<sup>1</sup> Pettitt 2011; Henry-Gambier 2008b; Henry-Gambier 2013; Orschiedt 2018; Giacobini 2006; Martini/Giacobini 2024;

D'Errico/Vanhaeren 2015; Mussi 1986; Mussi 2004; Coste 2016; Coste in press.



**Fig. 1** Map of Gravettian burials. 24 archaeological sites across Europe in 15 areas mentioned in the article: 1 Paviland (UK); 2 Vilhonneur (France, Charente); 3 Cro-Magnon, Cussac, Pataud, La Rochette (France, Dordogne); 4 Le Figuier, Le Marronnier (France, Ardèche); 5 Lagar Velho (Portugal); 6 Cavillon Cave or Barma del Caviglione, Grotte des Enfants or Grotta dei Fanciulli, Barma Grande, Baouso da Torre (Italy, Liguria, Balzi-Rossi); 7 Arene Candide (Italy); 8 Paglicci Cave (Italy); 9 Ostuni (Italy); 10 Veneri Parabita (Italy); 11 Krens-Wachtberg (Austria); 12 Brno, Dolní Věstonice, Pavlov, Předmosti (Czech Republic); 13 Kostenki (Russia); 14 Sunghir (Russia); 15 Mal'ta (Russia).

**Abb. 1** Karte der im Artikel erwähnten gravettienzeitlichen Bestattungen. 24 archäologische Fundstätten in Europa in 15 Regionen: 1 Paviland (Großbritannien); 2 Vilhonneur (Frankreich, Charente); 3 Cro-Magnon, Cussac, Pataud, La Rochette (Frankreich, Dordogne); 4 Le Figuier, Le Marronnier (Frankreich, Ardèche); 5 Lagar Velho (Portugal); 6 Cavillon-Höhle oder Barma del Caviglione, Grotte des Enfants oder Grotta dei Fanciulli, Barma Grande, Baouso da Torre (Italien, Ligurien, Balzi-Rossi); 7 Arene Candide (Italien); 8 Paglicci-Höhle (Italien); 9 Ostuni (Italien); 10 Veneri Parabita (Italien); 11 Krens-Wachtberg (Österreich); 12 Brno, Dolní Věstonice, Pavlov, Předmosti (Tschechische Republik); 13 Kostenki (Russland); 14 Sunghir (Russland); 15 Mal'ta (Russland).

the social hierarchies within these societies. This potential wealth can be questioned either by the quantity of ornaments or associated furnishings, as at Sunghir for example (Testart 2012), or by the rarity of materials deposited near the deceased, such as ivory in Italian burials or the quality of the exogenous flints at Barma del Caviglione, Liguria, Italy (De Lumley 2016; Onorardini et al. 2011).

The infrequency of individuals buried in this type of grave also raises the question of access to this type of burial. It should also be kept in mind that the clothing of the dead is not necessarily that of the living and that the finery found in a grave may be more of a funerary deposit than representative of the everyday clothing of the individual.

A number of individuals in our corpus (11) were found without associated finery. Of these, those from south-western France were the subject of a funeral ritual specific to this geographical area (Villotte et al. 2019), to the extent that for our purposes of reconstructing clothing, they offer little information. Moreover, the absence of adornment may

mean that it was made of organic material (such as feathers, wood, or fur) and so was not preserved; alternatively, funeral rituals in this area may have excluded any form of clothing or personal ornaments. We can also imagine graves linked to sacrifices (Formicola 2007), as suggested by the injury of Sunghir 1 mentioned by E. Trinkaus/A. P. Buzhilova (2018), or other burials containing individuals whose bodies had been clearly restrained, probably by ropes, like DV3 (Czech Republic), Kostenki 14, Voronezh Oblast (Russia) Pettitt 2011). Such situations also distort our perception of their potential clothing.

Here, we present the main archaeological information, the precise geographical location of the burials, the finds of adornments associated with the individual bodies (Coste 2016; Coste in prep.), as well as photographs of some of the casts preserved at the University of Turin (Fig. 3–6; Giacobini 2006; Fabbri/Giacobini 2021). Furthermore, we compile the ornaments or types of adornment known from these MUP burial contexts (Fig. 7–8).

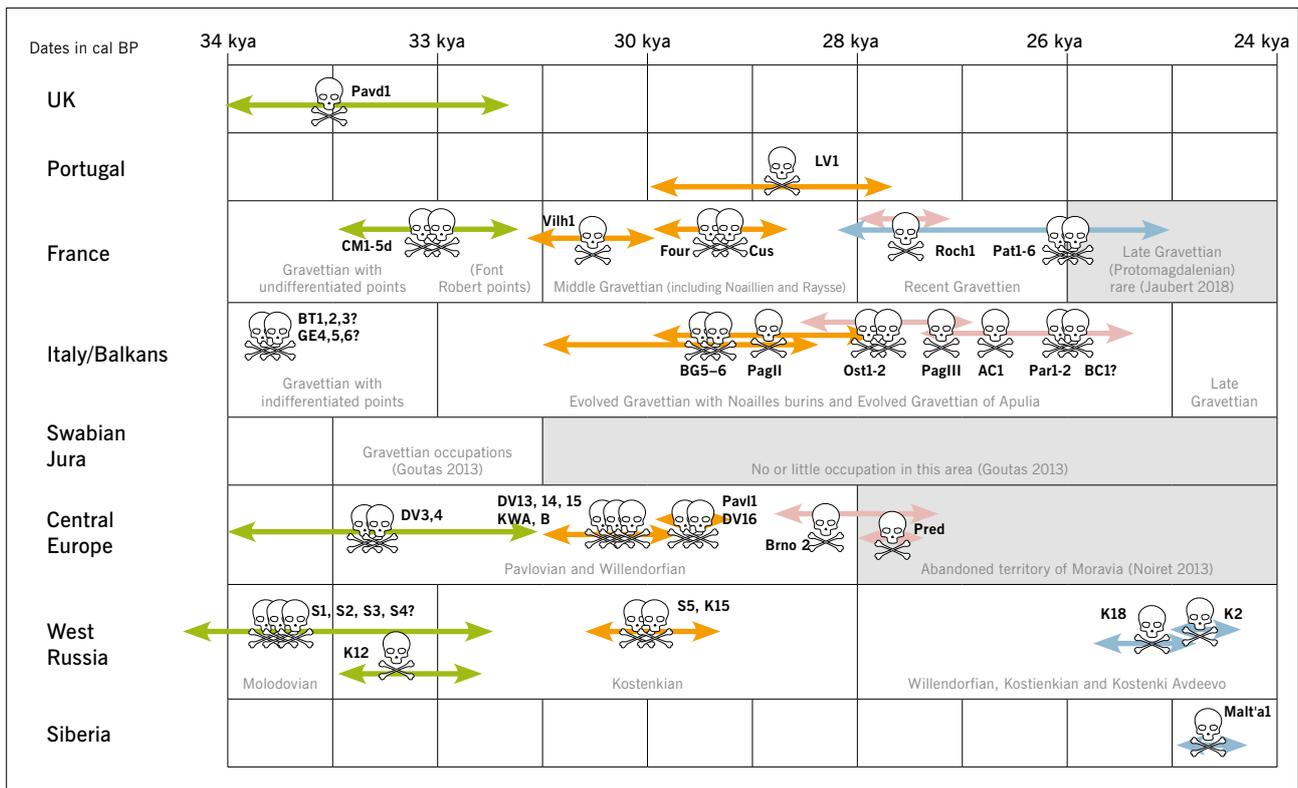


Fig. 2 Timeline of Gravettian Burials (abbreviated): AC = Arene Candide; BC = Barma del Caviglione (Cavillon); BG = Barma Grande, Brno; BT = Baouso da Torre; CM = Cro-Magnon; Cus = Cussac; DV = Dolní Věstonice; Four = Fournol; GE = Grotte des Enfants; K = Kostenki, Malt'a; Ost = Ostuni; Pag = Paglicci; Par = Parabita; Pat = Pataud; Pavd = Paviland; Pavl = Pavlov; Pred = Předmosti; Roch = La Rochette; S = Sunghir.

Abb. 2 Zeitleiste der gravettienzeitlichen Bestattungen (abgekürzt): AC = Arene Candide; BC = Barma del Caviglione (Cavillon); BG = Barma Grande, Brno; BT = Baouso da Torre; CM = Cro-Magnon; Cus = Cussac; DV = Dolní Věstonice; Four = Fournol; GE = Grotte des Enfants; K = Kostenki, Malt'a; Ost = Ostuni; Pag = Paglicci; Par = Parabita; Pat = Pataud; Pavd = Paviland; Pavl = Pavlov; Pred = Předmosti; Roch = La Rochette; S = Sunghir.

Italy

The Gravettian burials from Italy are the most numerous and the best preserved in terms of finery. They show many similarities among each other, even when comparing northern and southern Italy, reflecting traditions shared over long distances (Cavillon, Liguria/Ostuni, Apulia; Barma Grande, Liguria/Arene Candide 1, Liguria)<sup>2</sup>. The burials of men, women, and children/adolescents are equally adorned or unadorned. When the individual's sex is known, no particular difference can be noted between the sexes. However, the graves of women appear to be the most numerous. Young children and babies, however, are not present in the MUP record of burials in Italy (Henry-Gambier 2008a).

The preferred type of shellfish used for personal ornaments are *Tritia neritea* (previously *Cyclope neritea*), mainly found as head ornaments and representing the most numerous type, by far (Cavillon, Ostuni 1a-b, BG2-5, GE4 and GE6, BT2, AC1), with sometimes more than 100 in a single grave (Cavillon = 300, AC1 = 100; Quatrepoint et al. 2016; Palma di Cesnola 2002, 266). This Mediterranean shellfish, often found in great abundance in shallow lagoons, is not difficult to access for groups living close to the sea. The shell is easy to perforate when drilling with a little pressure.

They can also be worn as bracelets either on the arm or wrist (BT1, BT2, GE5, Ost1a, AC1) or on the leg (BC1, BT1; Tab. 1-2).

The next most frequent personal ornaments from Italian MUP burials are atrophic deer canines, also used mainly as head ornaments, often as a brow band (Pagl II, Pagl III, BC1, BT1, BT2, GE4, Par2, BG2-4). Deer canines as head ornaments are sometimes worn alone or in combination with *Tritia neritea* shells. They are also found in necklaces (BG2, BG4) or along the legs (BT1, Liguria, Paglicci II and III, Apulia).

Other types of shellfish are also present, sometimes representing a broad spectrum of species (e.g. BT2 see Coste 2016; Rivière 1887); fish vertebrae are present in the finery, as well (BG2-4). Mammoth ivory ornaments are rare in a region where this animal was not present (BG2-5, AC1).

In terms of exceptional preservation, the BG4 necklace is particularly noteworthy, its layout having been preserved and excavated from the clay (Fig. 7b). The composition is incredibly meticulous, showing a pattern that is repeated by a double row of four fish vertebrae, deer canines, and *Tritia neritea* shells. R. Verneau, who had worked a lot with the firsts archaeologists of the the Balzi Rossi Caves, wrote: >A pretty necklace passed a little bit below the right angle of

2 Malerba/Giacobini 1992; Malerba/Giacobini 2014; Giacobini 2006; Martini/Giacobini 2024; Mussi 1986; Mussi 2004; Palma di Cesnola 2001; Formicola/Holt 2015; French/Nowell 2022.

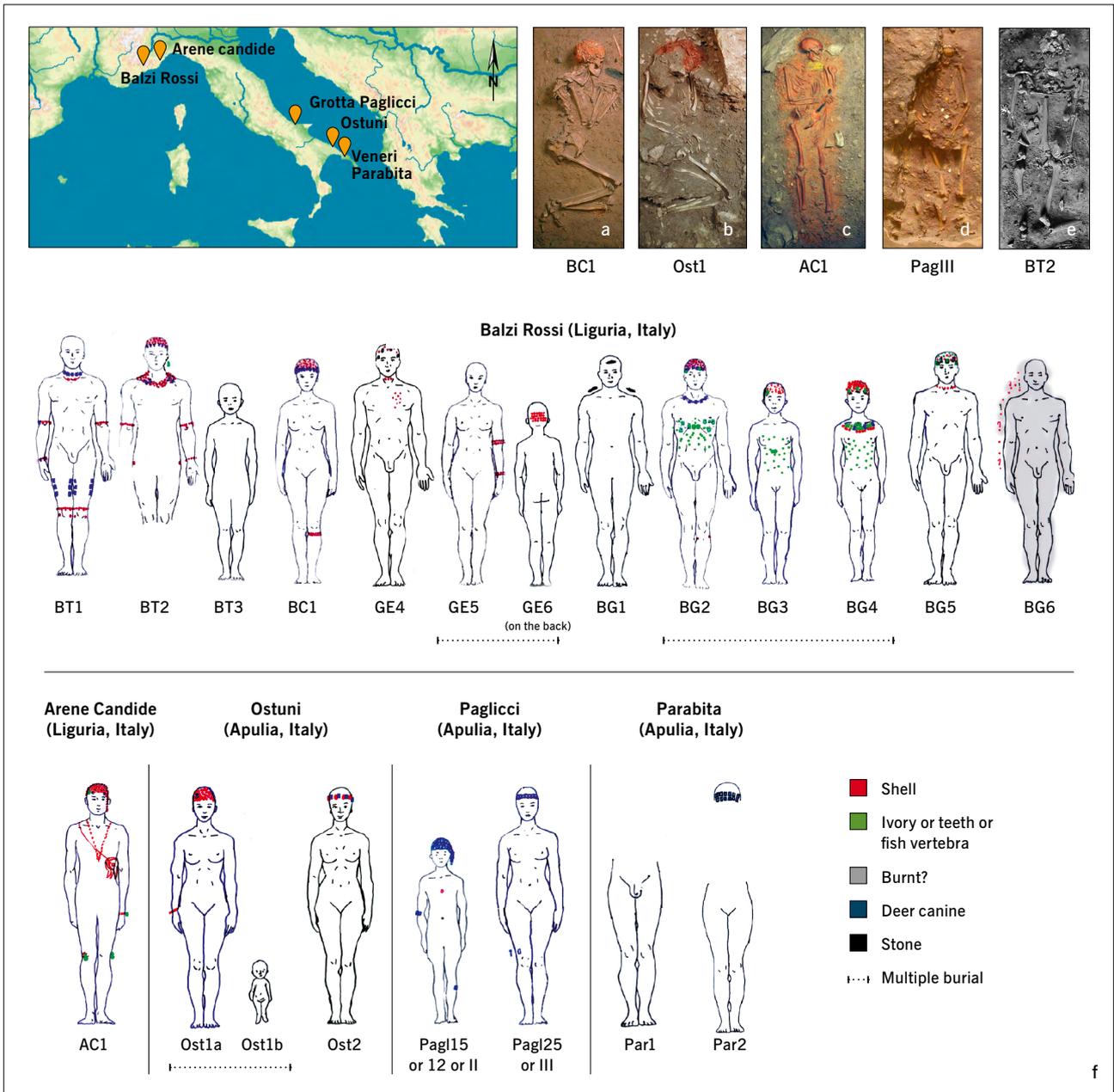
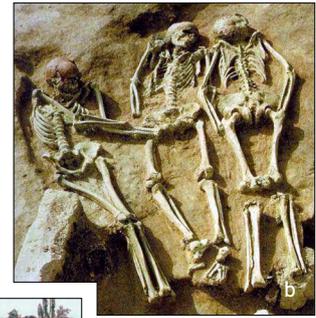
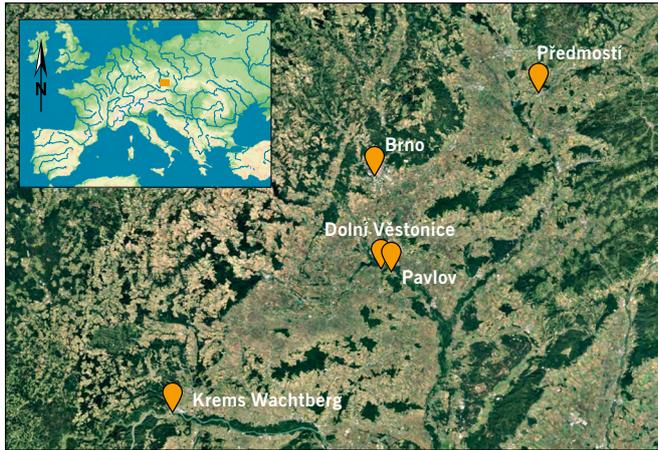


Fig. 3a–f Archaeological data for Italy. Gravettian individuals in burials and their adornments with a map of the locations of the Gravettian burials in Italy; a–e pictures of casts or originals of some Italian burials. a Cavillon (cast); b Ostuni 1a–b (cast); c Arene Candide 1 (cast); d Paglicci III (cast); e Baouso da Torre 2 (original, in the Musée d’Archéologie National in Saint-Germain-en-Laye, in the 1970’s or 1980’s); f drawings of P. Coste from archaeological records with location and found material (colour coded, see legend) of adornment on the bodies for Italian Gravettian burials.

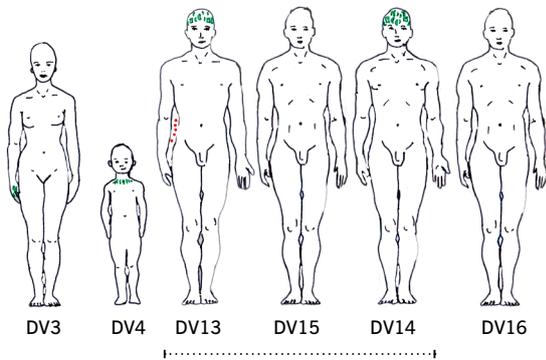
Abb. 3a–f Archäologische Daten für Italien. Gravettienzeitliche Individuen in Gräbern und ihre Schmuckelemente mit einer Karte der gravettienzeitlichen Bestattungen in Italien; a–e Aufnahmen von Abgüssen oder Originalen einiger italienischer Gräber. a Cavillon (Abguss); b Ostuni 1a–b (Abguss); c Arene Candide 1 (Abguss); d Paglicci III (Abguss); e Baouso da Torre 2 (Original, im Musée d’Archéologie National in Saint-Germain-en-Laye, 1970er oder 1980er Jahre); f Zeichnungen von P. Coste gemäß der archäologischen Dokumentationen mit Lokalisierung, Art (farbig markiert, s. Legende) der gefundenen Schmuckelemente an und auf den Körpern in den gravettienzeitlichen italienischen Gräbern Italiens.

Fig. 4a–d (right page) Archaeological data for Central Europe. Gravettian individuals in burials and their adornments with a map of the locations of the Gravettian burials in Central Europe (Czech Republic, Austria). a–c pictures or drawings of the discoveries *in situ*; a Krems-Wachtberg A–B; b triple burial of Dolní Věstonice DV13–15 during excavations; c only known drawing of the early discovery of Předmostí; d drawings of P. Coste from archaeological records. Place and material (colour code) of adornment on the bodies for Central Europe Gravettian burials. If it is not known where the decoration was located on the body, the beads are presented near the body but not on it.

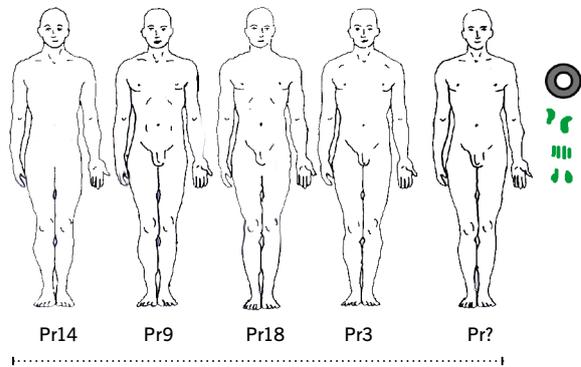
Abb. 4a–d (rechte Seite) Archäologische Daten für Mitteleuropa. Gravettienzeitliche Individuen aus Bestattungskontexten und ihre Schmuckelemente mit einer Karte der gravettienzeitlichen Bestattungen in Mitteleuropa (Tschechische Republik, Österreich); a–c Aufnahmen und Zeichnung der entdeckten Gräber *in situ*; a Krems-Wachtberg A–B; b Dolní Věstonice DV13–15 während der Freilegung; c einzig bekannte Zeichnung der früheren Entdeckung von Předmostí; d Zeichnungen von P. Coste gemäß der archäologischen Dokumentationen mit Lokalisierung, Art (farbig markiert, s. Legende) der gefundenen Schmuckelemente an und auf den Körpern in den gravettienzeitlichen Gräbern Mitteleuropas. Wenn nicht bekannt war, wo sich die Verzierung auf dem Körper befand, wurden die Schmuckobjekte in der Nähe des Körpers, aber nicht auf ihm, dargestellt.



**Dolní Věstonice (Moravia, Czech Rep.)**



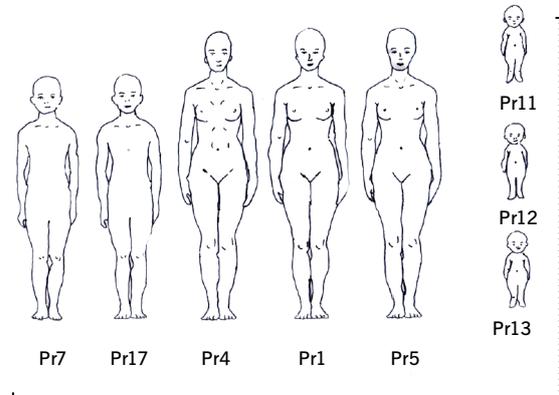
**Předmostí (Moravia, Czech Rep.)**



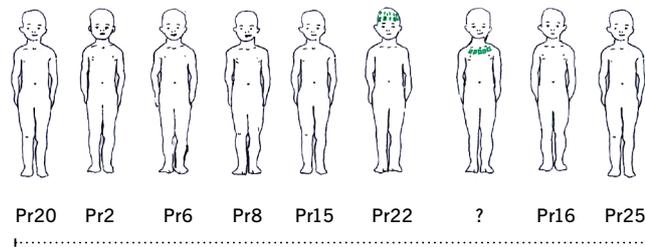
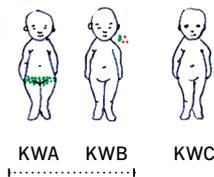
**Pavlov (Moravia, Czech Rep.)**



**Brno (Moravia, Czech Rep.)**



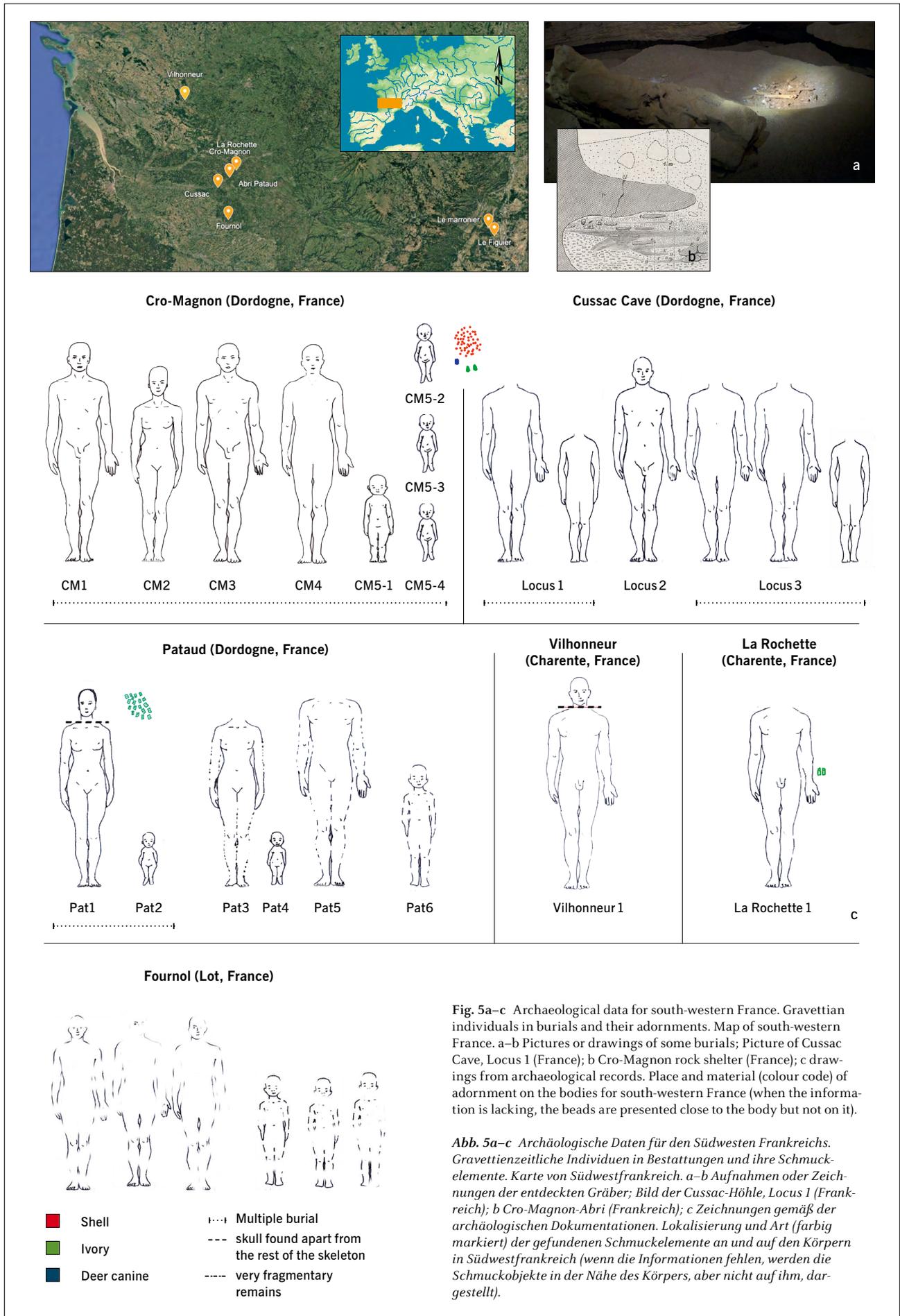
**Krems-Wachtberg (Lower Austria, Austria)**

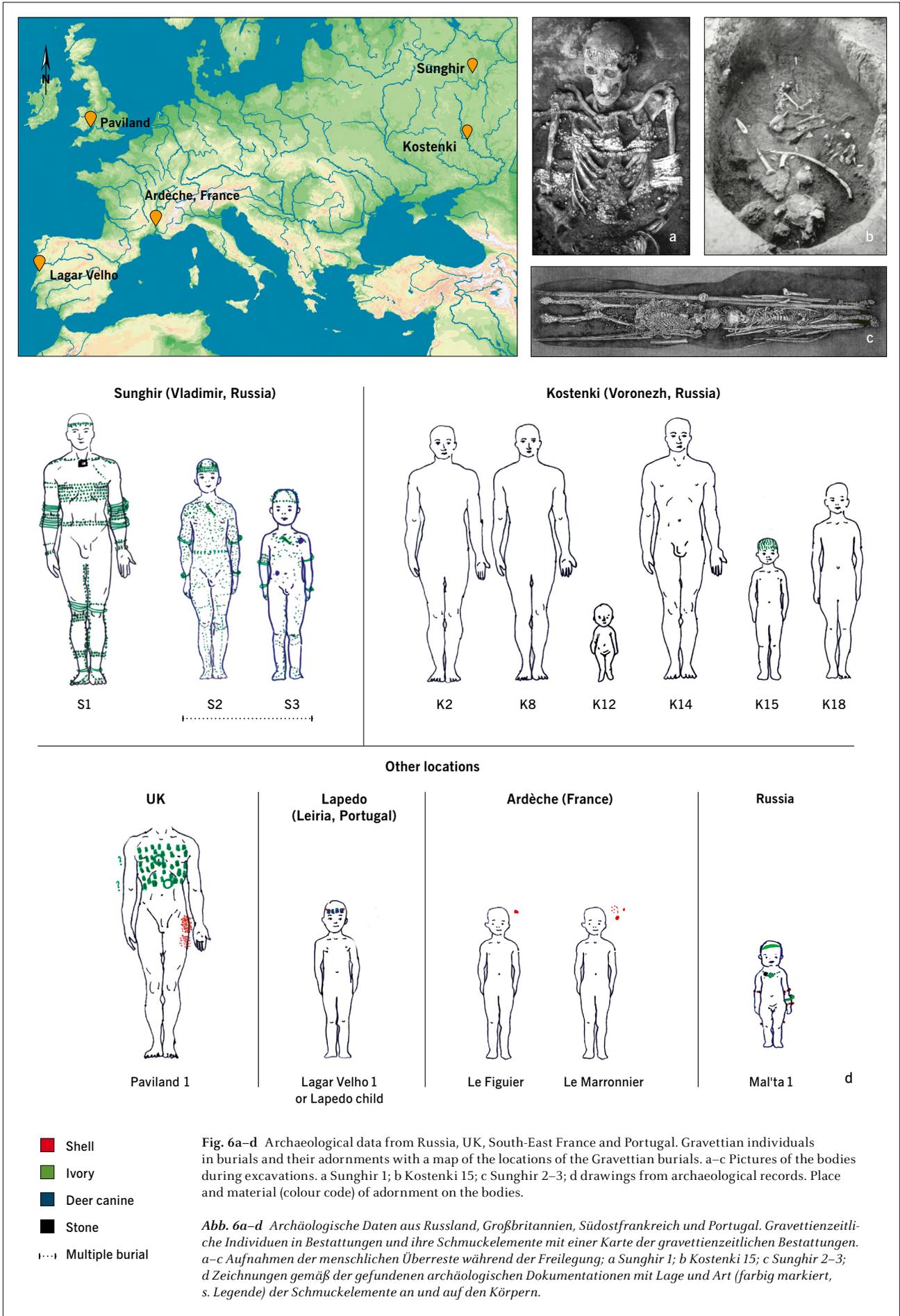


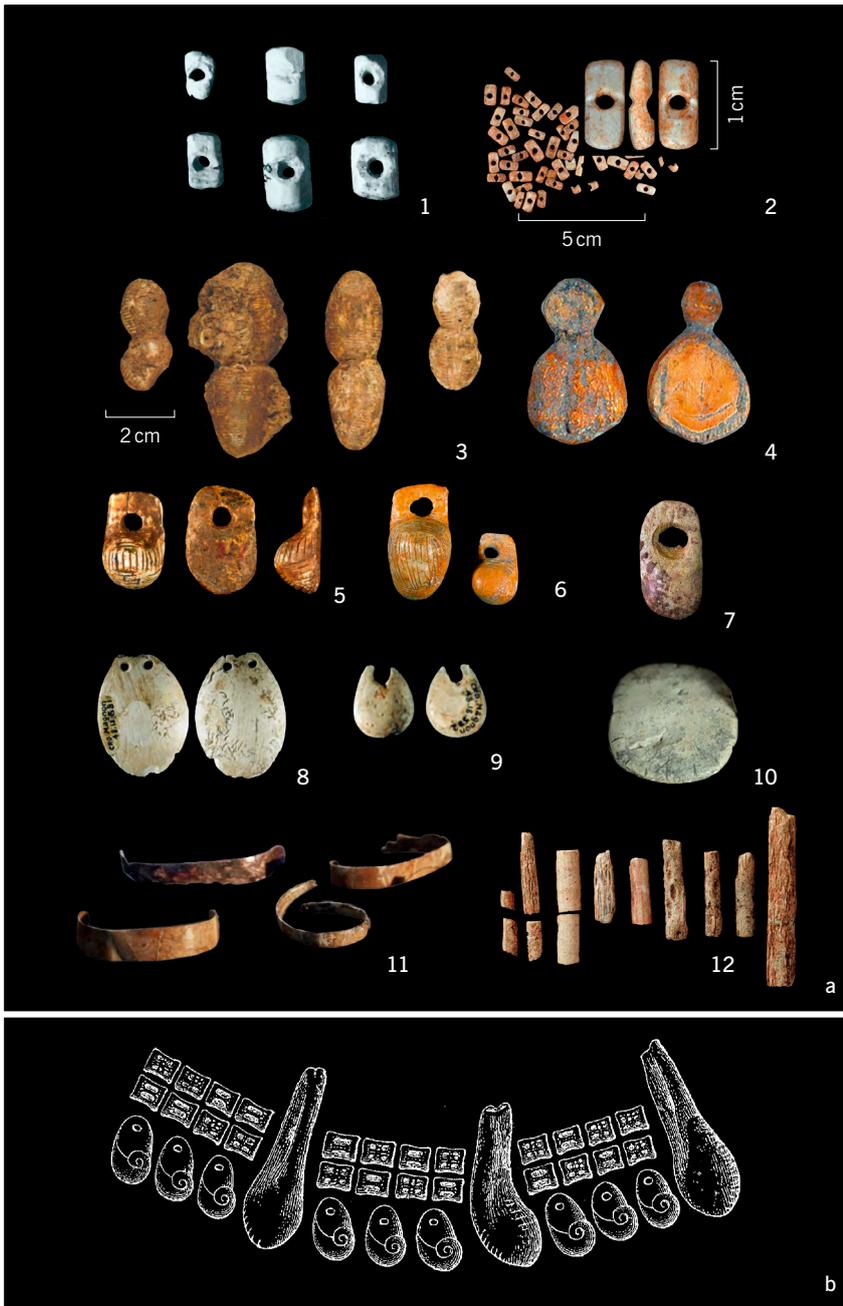
- Shell (fresh or fossil) or gastropods
- Ivory (disc, pendant, rods) or tooth (carnivore canine, fox or wolf)

- Marl disc
- Multiple burial

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**Fig. 7a** Ivory adornments in Gravettian graves. Not to scale. 1–2 Rectangular beads: 1 Sunghir; 2 Pataud 1–2; 3–4 Bilobated beads: 3 Barma Grande triple burial; 4 Arene Candide 1; 5–6 asymmetric ivory pendant: 5 one from the Barma Grande triple burial; 6 Arene Candide 1; 7 symmetrical bead one of the 53 beads from Krems-Wachtberg A; 8–9 Cro-Magnon pendants; 10 ivory disk from Brno 2; 11 bracelets from Sunghir burials; 12 ivory rods from Paviland 1.

**Abb. 7a** Schmuckelemente aus Elfenbein in gravettienzeitlichen Gräbern. Nicht maßstabsgetreu. 1–2 Rechteckige Perlen: 1 Sunghir; 2 Pataud 1–2; 3–4 doppelt gelappte Perlen: 3 Dreifachbestattung aus Barma Grande; 4 Arene Candide 1; 5–6 Asymmetrischer Elfenbein-Anhänger: 5 einer aus der Dreifachbestattung von Barma Grande; 6 Arene Candide 1; 7 eine der 53 symmetrischen Perlen aus Krems-Wachtberg A; 8–9 Cro-Magnon; 10 Elfenbeinscheibe aus Brünn 2; 11 Armreife aus den Sunghir-Bestattungen; 12 Elfenbeinstäbchen aus Paviland 1.

**Fig. 7b** Necklace from Barma Grande 4: *Tritia neritea*, red deer canine and fish vertebrae.

**Abb. 7b** Anhänger aus Barma Grande 4: *Tritia neritea*, Rotwild-Eckzähne und Fischwirbel.

the lower jaw, but below that it had slipped, and the component parts lay under the left temple. The different pieces of this collar were held in the position that they had originally occupied by the earth into which they had been pressed.

**Fig. 8 (right page)** Shells, teeth, and stone ring types of adornments in Gravettian graves. Not to scale. 13–16 Globular shells: 13 *Tritia neritea*; 14 *Littorina obtusata*; 15 *Theodoxus*; 16 *Littorina littorea*; 17 *Luria lurida*; 18 *Zonaria pyrum*; 19 *Trivia europaea*; 20–23 Round and pointed shells; 20 *Melanopsis*; 21 *Buccinum corniculum*; 22 *Hinia reticulata*; 23 *Columbella rustica*; 24–27 Elongated shells: 24 *Dentalium* fossil; 25 *Cerithium vulgatum*; 26 *Tympanotonos cinctus* fossil; 27 *Turritella communis*; 28–30 Bivalves: 28 *Glycymeris violacescens*; 29 *Cardium*; 30 *Pecten* (8–10cm); 31–33 Teeth: 31 Deer canine; 32 Fox canine. Stone rings (diam. 15cm): 33a one from Brno 2 grave; 33b one from Předmosti.

They comprised vertebrae of fish, *Tritia neritea* shells, and the canine teeth of deer, each specimen, of course, being pierced. The vertebrae were arranged in two parallel lines, and below them was a row of *Tritia neritea*<sup>3</sup>. At intervals,

**Abb. 8 (rechte Seite)** Muscheln, Zähne und Steinringe als Ornamente gravettienzeitlichen Gräbern. Nicht maßstabsgetreu. 13–16 Kugelige Muscheln: 13 *Tritia neritea*; 14 *Littorina obtusata*; 15 *Theodoxus*; 16 *Littorina littorea*; 17 *Luria lurida*; 18 *Zonaria pyrum*; 19 *Trivia europaea*; 20–23 Runde und spitze Muscheln: 20 *Melanopsis*; 21 *Buccinum corniculum*; 22 *Hinia reticulata*; 23 *Columbella rustica*; 24–27 Langgestreckte Muscheln: 24 *Dentalium*-Fossil; 25 *Cerithium vulgatum*; 26 *Tympanotonos-cinctus*-Fossil; 27 *Turritella communis*; 28–30 Muscheln: 28 *Glycymeris violacescens*; 29 *Cardium*; 30 *Pecten* (8–10cm); 31–33 Zähne: 31 Eckzahn eines Hirsches; 32 Eckzahn vom Fuchs; Steinringe (D. 15 cm): 33a einer aus dem Grab von Brno 2; 33b einer aus Předmosti.

3 R. Verneau (1900, 73) called exactly the seashell »*Nassa neritea*« now called *Tritia neritea*.



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Fig. 9 P. Coste (pregnant) trying on the Lady of Cavillon costume made by A. Gabillard during preparation of *Looking for Sapiens* in 2016.

Abb. 9 P. Coste (schwanger) bei der Anprobe des Kostüms der Dame von Cavillon, das A. Gabillard während der Vorbereitung von *Looking for Sapiens* im Jahr 2016 angefertigt hat.

these three rows were interrupted by a deer's tooth ornamented with striae (cf. Fig. 7b; Verneau 1900, 73).

In the documentary *Ladies and Princes of Prehistory*, directed by the first author, the Lady of Cavillon (BC1: Barma del Caviglione 1) is the film's main character; therefore, her group and clothing were selected for reconstruction.

Only the headdress and a leg band of shells are known in her case, so the costume used for the TV documentary was largely hypothetical. Leathers and furs were chosen according to the fauna known from the Gravettian levels of the site (Rivière 1872, 1887): they included aurochs, deer, horse, and marmot. The choice of colour for the leathers worn by the Cavillon tribe was inspired by the fur of these animals (beige and brown).

In the sites monograph edited by H. de Lumley (2016) P. Valensi and A. Moussous (2016, 148–149) are even more

precise: close to the burial, after the excavation at the Musée de l'Homme (1988/89), they found: deer, ibex, horse, wild boar, aurochs and roe deer. They mention that E. Rivière, the excavator of the site, also mentioned the presence of cave bear, a proboscidean, a rhinoceros, lynx, wolf, fox, and elk among the fauna.

Based on her study of the Lady of Cavillon's adornments on the skull, M. Quatrepoint, reconstructed headdresses in fishnets (Quatrepoint et al. 2016).

On the skull, the red colour is very strong where the headdress was supposed to be. But was it only a funerary practice or the colour of a dye garment? A choice was made in the documentary to dye the headdress in red ochre during the funeral of the main character (Lady of Cavillon), on screen, so as a post-mortem practice.

One of us (P. Coste) had already commissioned a costume for the Lady of Cavillon in 2018 for a previous documentary, *Looking for sapiens*. In this initial version, the headdress was ochred before (antemortem dye) and shells and a few deer canines were sewn on a headgear in leather. Cowhide leather was used for the costume, which was made by costume designer A. Gabillard<sup>4</sup> (Fig. 9), while those of the Lady of Cavillon's tribe for *Ladies and Princes of Prehistory* were created and sewn by costume designer M. Lagarde (Fig. 10–11).

The garments are hypothetical (warm tunic, fur trim on sleeves or hood, leather pants, moccasins). To evoke the Cavillon Lady's potential status as a clan leader, M. Lagarde wanted to use full sleeves to enhance the actress' charismatic appearance. However, these loose-fitting sleeves were problematic in that they made it difficult to wear a backpack (made of plant fibre by F. Moser) or to use a spear thrower.

The leg band, composed of some 40 *Tritia neritea* shells, was reconstructed as a garter, making the leather pants more comfortable to wear. But, of course, we could have alternatively imagined this band as a bracelet worn directly on the leather. The punch found near the Lady of Cavillon's skeleton could also have been part of the finery, as it was discovered close to her head (Rivière 1887, 139). This punch is made from a horse metatarsal and is 175.5 x 28.0 x 9.5 mm in size (Grégoire et al. 2016, 502–503). E. Rivière interpreted it as a weapon or a part of the headdress (Rivière 1887) but in the documentary, the director (P. Coste) chose to use it only as a funerary deposit.

4 The *Looking for Sapiens'* costume of Lady of Cavillon was created in 2016, with a very limited budget. This was during P. Coste's pregnancy (5<sup>th</sup> month), so she asked A. Gabil-

lard to produce the costume to fit a pregnant woman. For this reason, the costume turned out to be rather large. Since in the Palaeolithic clothes were not often produced,

women's clothing may have customarily been generously sized, as in Inuit groups.

**Fig. 10** Costume designs by M. Lagarde for the Lady of Cavillon (BC1) for *Ladies and Princes of Prehistory* (by P. Coste 2021).

**Abb. 10** Kostümentwürfe von M. Lagarde für die Dame von Cavillon (BC1) für *Ladies and Princes of Prehistory* (von P. Coste 2021).

The clothes for the rest of the group were made similarly regarding the leather hues, to enhance the group's homogeneity. Another costume was made, and others were borrowed and altered to suit the additional actors (three men, four women, and three children). A bias may lie in the fact that the Balzi Rossi men in the documentary do not wear headdresses or adornment unlike the archaeological finds (Fig. 3)

M. Lagarde described the design process as follows: ›During the research for the Lady of Cavillon costume, we really questioned ourselves about the different possible traces of clothes, accessories and adornments, in terms of forms, materials, and techniques (sewing, braiding, embroidery, macramé, ornamental leather cuts, etc.). This was done so as not to fall into the stereotype of prehistoric costumes, and not to underestimate the cultural wealth of that era (see all the designs proposed for the Lady of Cavillon; cf. Fig. 10). The budgetary and time constraints do not often make it possible to restore the found adornments and realise



**Fig. 11a–d** Screenshots of Cavillon tribe in *Ladies and Princes of Prehistory* directed by P. Coste (Balzi-Rossi Cave, Gravettian). Costumes made by M. Lagarde or borrowed. a J. Chaussebourg, the actress who played the Lady of Cavillon with the headdress (fishnet) made by M. Quatrepoint; b scene of two women and a little girl (daughter of P. Coste) making headdresses (fishnets with shells; filmed on green screen); c scene of women and children collecting shells close to the Balzi-Rossi Cave (filmed on green screen in 2020); d scene of the Lady of Cavillon's burial (filmed on green screen, the incrustation of the background in the real wall of Cavillon's Cave in 2020).

**Abb. 11a–d** Bildschirmaufnahmen des Cavillon-Stammes in *Ladies and Princes of Prehistory* unter der Regie von P. Coste (Balzi-Rossi-Höhle, gravettienzeitlich). Die Kostüme wurden von M. Lagarde entworfen oder ausgeliehen. a J. Chaussebourg, die Schauspielerin, die die Lady of Cavillon spielte, mit dem von M. Quatrepoint angefertigten Kopfschmuck (Fischnetz); b Szene mit zwei Frauen und einem kleinen Mädchen (Tochter von P. Coste), die Kopfschmuck (Fischnetz mit Muscheln; auf Greenscreen gefilmt) herstellen; c Szene mit Frauen und Kindern, die in der Nähe der Grotte von Balzi-Rossi Muscheln sammeln (2020 auf Greenscreen gefilmt); d Szene der Beisetzung der Lady of Cavillon (auf Greenscreen; die Inkrustation des Hintergrunds in der echten Wand der Höhle von Cavillon im Jahr 2020).



Fig. 12 Costume designs by M. Lagarde for Dolní Věstonice for *Ladies and Princes of Prehistory* (by P. Coste 2021).

Abb. 12 Kostümentwürfe von M. Lagarde für Dolní Věstonice für *Ladies and Princes of Prehistory* (von P. Coste 2021).

hypotheses of clothing with original techniques; by default, the costumes are made in simplified forms. For *Ladies and Princes*, almost all the costumes were sewn by hand, which was already very time-consuming.

The actor's skin colour was chosen according to aDNA evidence, even though it was hard to find publications about skin colour for the Gravettian period at the time of the shooting (2020). Therefore, we had to interview anthropologists, prehistorians or geneticists (S. Villotte, M.-F. Deguiloux, B. Valentin) to make choices for both actors and extras. These requirements complicated the casting of actors: finding dark-skinned individuals with flint knapping skills in Périgord (South-West France) was difficult. A compromise was made with actors of different colour skins but not necessarily coherent group. Although Ostuni 1a would have been darker-skinned than other brown-skinned Italian individuals of the period<sup>5</sup>, to be honest, we did not know this at the time of the shooting.

Recent publications support our choice of brown skin colour (Jablonski 2021), whereas the eye colour may have been incorrect. It was light in the shooting, but – according to more recent studies – eye colour was perhaps more brownish in the Gravettian period.

The documentary also highlighted three other sites with exceptional burials for which clothing had to be reconstructed: Dolní Věstonice, Sunghir and Cussac.

## Central Europe

33 Gravettian burials are known from Central Europe, 20 of which came from the poorly documented multiple burial sites of Předmosti in the Czech Republic. These remains, which stem from early discoveries, have unfortunately been lost; only a few skull casts, such as Předmosti 3, survive<sup>6</sup>.

Personal ornaments are quite rare in Central European MUP burial contexts. They often comprise carnivore canines (foxes or wolves) or sometimes ivory pendants (Krems-Wachtberg, Lower Austria [Austria], Dolní Věstonice [Břeclav District] triple burial, Předmosti, both Czech Republic). They are worn on an individual's head (DV14–15, Pred 22), neck (DV4), or near the hand (DV3). The only truly exceptionally ornamented burial from Central Europe is that from Brno 2, preserved in the Moravian Museum in Brno. Very different from the Dolní Věstonice burials, Brno 2 includes a large number of *Dentalium* fossils (cf. Fig. 7,24), which were spread widely around the individual's head (Valoch 1996, 144). Other shells were found with the burial of the Krems-Wachtberg twins (KWA-B) at the neck of the second baby (cf. Fig. 7,15; Teschler-Nicola et al. 2020) but they were not *Dentalium* but *Theodoxus*.

Parallels can be observed in the burial sets from Brno 2 and Předmosti, notably in the similarly worked stone disc rings (cf. Fig. 7,33a–b; Valoch 1996, 144). Central European finery is much less varied compared to the evidence from Italy. This was taken into account in the manufacture of the costumes, which were designed to evoke a colder climate than Italy, and this was reflected in the choice of furs.

In *Ladies and Princes of Prehistory*, the Dolní Věstonice triple burial of three young adult men was taken as a reference (DV13–15; cf. Fig. 4). For these individuals, on the advice of one of us (P. Coste), the costume designer planned very warm, light-coloured garments resembling the fur of reindeer or polar fox (Fig. 12). Fox canines (casts) and oval pendants sewn on warm caps, coloured in ochre, were the only garments associated with the triple burial (Svoboda 2010, 57–58; Pettitt 2011). Fur coats were salvaged from a second-hand shop (for reasons of cost, ethics, and not wanting to encourage the exploitation of furs). Two costumes were created in this way. DV13's ochred skullcap should have inspired the design of the headgear, but although one of us (P. Coste) filmed in the site's anthropology laboratory in August 2020, the information reached the costumers too late to be utilised accordingly.

The scene's additional costumes (for the third deceased individual and the extras taking part in the funerary ritual) were borrowed. The warmest reindeer fur costume – (worn by the third deceased and in a few other scenes) was made by L. Bernat (director of the Le Bournat site, Dép. Dordogne [France]) for a TV show *Les pouvoirs extraordinaires du corps humain* filmed in the Dordogne around 2015 for France TV. This costume (coat and pants) is currently preserved by the guides speakers of the Musée

5 <<https://genetiker.wordpress.com/pigmentation/>> (31.07.2025).

6 Henry-Gambier 2008b; Pettitt 2011; Valoch 1996; Neugebauer-Maresch 1999.



**Fig. 13a–d** Screenshots of Dolní Věstonice burial and costumes (inspired by DV13–15 triple burial) in *Ladies and Princes of Prehistory* directed by P. Coste. Costumes made by M. Lagarde or borrowed. a M. Lacoste wearing a reindeer costume made by L. Bernat; b–c Reconstruction of the Dolní Věstonice triple burial (DV13–15) during the funeral (filmed on green screen, 2020); c close up (of b): beads sewn on red coloured headgears are visible; d screenshot of Gravettian groups on a map in *Ladies and Princes of Prehistory*. Couples (men and women) were filmed on greenscreen in studio for each region to show the diversity of clothing and adornment in the Gravettian period.

**Abb. 13a–d** Bildschirmaufnahmen der Bestattung von Dolní Věstonice und der Kostüme (inspiriert von der Dreifachbestattung DV13–15) in *Ladies and Princes of Prehistory* unter der Regie von P. Coste. a M. Lacoste trägt ein Rentierkostüm von L. Bernat; b–c Rekonstruktion der Dreifachbestattung von Dolní Věstonice (DV13–15) während der Beisetzung (gefilmt auf Greenscreen, 2020); c Nahaufnahme (von b): die auf rot gefärbte Kopfbedeckungen genähten Perlen sind sichtbar; d Bildschirmaufnahme der gravettienzeitlichen Gruppen auf einer Karte in *Ladies and Princes of Prehistory*. Für jede Region wurden Paare (Männer und Frauen) auf Greenscreen im Studio gefilmt, um die Vielfalt der Kleidung und des Schmucks im Gravettien zu zeigen.

National de Préhistoire in Les Eyzies (Fig. 13a–c). Another costume, which had originally been made for the Lady of Cavillon in *Looking for Sapiens*, was here worn by a man (cf. Fig. 13b, right). Finally, the last costume – worn by a woman – is the personal property of S. Géraud (an extra in *Ladies and Princes of Prehistory* who usually works in the Lascaux Cave). She tanned and sewed it herself, and wore the tunic, pants, lined boots, hat, and gloves during actual cold conditions during a stay in the Nordic countries (Fig. 13b.d).

## Russia

The Sunghir burials are the best-known in the Palaeolithic and the most richly decorated, comprising the burial of an adult man (S1) and the double burial of the S2–S3 children. Ornamentation of the burials is extremely rich and is composed of numerous tiny ivory beads (over 10 000 in total on the three individuals), mostly aligned in rows or bands, fox canines (up to 250 worn as belts for the adolescent S2),

bracelets (some dyed black<sup>7</sup>) and the children's imposing funerary furnishings (ivory spears, figurines, etc.; cf. Fig. 5; Dobrovolskaya 2012; White 1993).

Leaving aside the sheer richness of the Sunghir burials, in some respects, especially in the choice of materials – ivory and carnivore teeth – the ornaments known from Russia are very similar to those from Central Europe. They were mainly worn on the head. The S2 and S3 from Sunghir, aged 7–10 years, Kostenki 18, Předmosti 22, and DV4 are the few exceptions buried with larger amounts of personal ornaments. In contrast, adults from this region and this period mostly lack ornaments.

Production of the Sunghir costumes was very labour-intensive. The fur components of the garments were chosen in black (with no specific reference to local fauna) to enhance the contrast with the light-coloured ivory beads; the furs were salvaged from second-hand shops, as was the case for Dolní Věstonice. The most complicated part of the clothing reconstruction was making, finding, and attaching 10 000 beads. M. Lacoste and L. Franceschi made 2000 beads in soapstone (the most visible ones on the headgear), which

<sup>7</sup> R. White (1993) states: re Sunghir 1: ›His forearms and biceps were each decorated with

a series of polished mammoth ivory bracelets (25 in all), some showing traces of black paint.



Fig. 14 Costume designs by M. Lagarde for Sunghir for Ladies and Princes of Prehistory (by P. Coste 2021).

Abb. 14 Kostümentwürfe von M. Lagarde für Sunghir für Ladies and Princes of Prehistory (von P. Coste 2021).

alone required about 60–90 hours of work. Similar but plastic beads were purchased over the Internet to complete the picture. The whole ensemble was sewn by M. Lagarde and her assistant; strung onto threads, the beads were then sewn onto the garments (tunics, pants, boots, and headgear). Small capes made of dark fur were added, held in place by bone pins (Fig. 14–15).

A few ivory finger rings were added<sup>8</sup>, as well as a stone pendant with a red dot for the man, and ›ivory‹ bracelets made of plastiline. Two white-painted wooden spears made by the prop designer were added as funerary goods (representing the Sunghir ivory spears). Despite the team's efforts and two months' preparation of the entire set of costumes, the result was still less rich than the actual burial context. The filter added to the movie to provide a less realistic impression and enhance the ambiguity of the reconstructions and scenes created a kind of ›painting‹ effect that tended to erase some of the fine details of the reconstructions.

### South-West France

Gravettian Burials of south-western France have yielded highly fragmentary remains of numerous individuals at several sites, mainly in the Dordogne area (Cro-Magnon, Pataud, Cussac) or close to it: Vilhonneur (Dép. Charente), Fournol (Dép. Lot). However, very few of these are of interest for reconstruction purposes (cf. Fig. 5).

To begin with, some are probably secondary burials (Cussac Locus 1 and 3, Fournol; Villotte et al. 2019; Villotte

et al. 2021) or have not yet been fully excavated (Cussac Locus 2; Jaubert et al. 2020). Other individuals have no – or very rare – ornaments (Foucher et al. 2019).

Only those from Cro-Magnon (5 or 8 individuals, Partiot et al. 2020), Pataud (Nespoulet 2013; Vercoutère et al. 2011) and La Rochette 1 (Bosinski 1990, 65; Orschiedt 2002; Delporte 1962) have yielded finery, but they are so diverse in nature and spread over the entire Gravettian period that it is difficult to establish consistent patterns for MUP dress in south-western France (cf. Fig. 2).

At Cro-Magnon, numerous shells, mostly *Littorina* sp., or *Turritella* sp. (now dispersed throughout the world), were found<sup>9</sup> (Fig. 8,16.27). Teardrop-shaped ivory pendants, which resemble objects from the early Gravettian layers of Abri Pataud (layer 5), are also known (Henry-Gambier et al. 2013). However, the early date of the excavations at Cro-Magnon and the lack of precise records do not allow us to associate these finds with any particular individual.

At Abri Pataud, small ivory beads were found associated with the burials Pataud 1 and 2 (n = 94; cf. Fig. 7,2; Nespoulet et al. 2013); they are very similar to those at Sunghir (cf. Fig. 7,1) and – on a more local level – to those at Blot and Peyrugues, although discovered in much smaller numbers. The remains are extremely fragmentary, and it is difficult to locate the adornment on the body. At the same time, despite good excavations in the 1950s by H. L. Movius Jr., the contextual information available is patchy. The level of the burials (layer 2), dated to the Late Gravettian period, has yielded other elements of adornment, including fossil shells.

8 Only one is mentioned for Sunghir 10 in Trinkaus/Buzhilova 2018, 10; but we first found

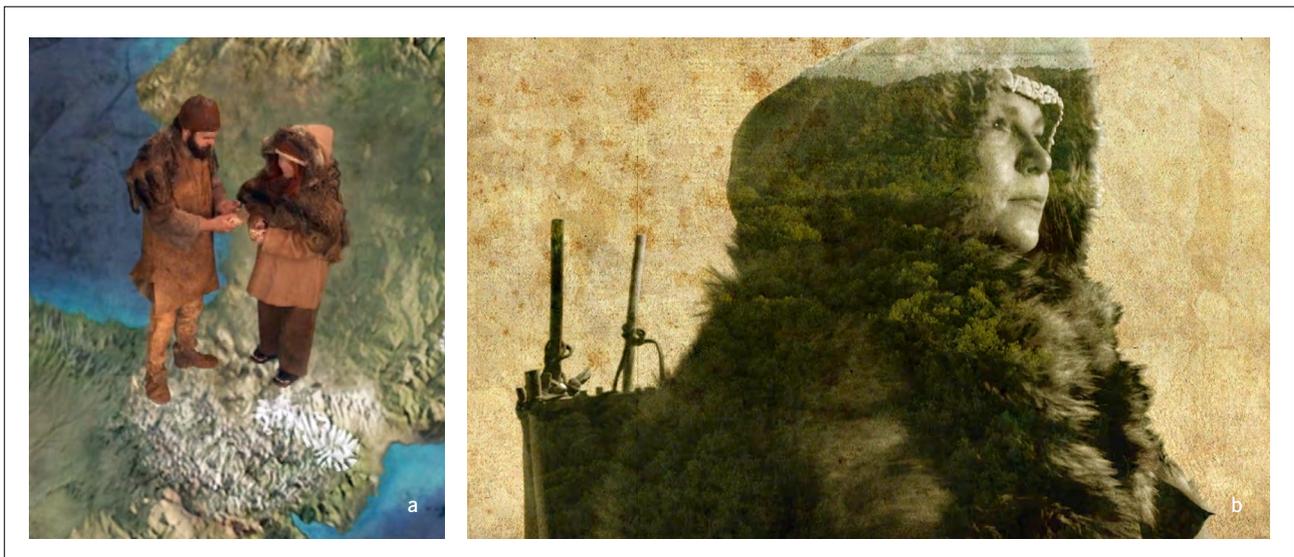
this information in Leroi-Gourhan 1988, 1049 for Sunghir 2 and 3).

9 Bougard 2014; Baker et al. 2022; Taborin 1993; Taborin 2000; Taborin 2004.



**Fig. 15a–d** Screenshots of the Sunghir burial and costumes in *Ladies and Princes of Prehistory* directed by P. Coste. Costumes made by M. Lagarde and her assistant or borrowed. 2000 beads made by M. Lacoste and L. Franceschi, 5000 plastic beads added. a Children of Sunghir 2–3. Costumes based on the archaeological finds in the double burial; b scene of the burial of Sunghir 1 (filmed on greenscreen studio in 2020); c evocation scene of meeting and trade between two Gravettian groups. On the right: based on Sunghir tribe, on the left the Cavillon or Balzi-Rossi tribe. They exchange Mediterranean *Tritia neritea* shells and long flint blades. In the reality, the two groups probably never met. d Sunghir 1 (in the middle) and the Sunghir 2 and 3 children. All costumes are based on the archaeological finds in the burials.

**Abb. 15a–d** Bildschirmfotos der Bestattungen von Sunghir und der Kostüme aus *Ladies and Princes of Prehistory* unter der Regie von P. Coste. Die Kostüme wurden von M. Lagarde und ihrer Assistentin angefertigt oder ausgeliehen. 2000 Perlen wurden von M. Lacoste und L. Franceschi angefertigt, 5000 Plastikperlen hinzugefügt. a Kinder aus Sunghir 2–3. Die Kostüme basieren auf den archäologischen Funden in der Doppelbestattung; b Szene der Bestattung von Sunghir 1 (gefilmt auf Greenscreen, 2020); c Szene der Begegnung und des Handels zwischen zwei gravettienzeitlichen Gruppen. Auf der rechten Seite: der Stamm aus Sunghir, auf der linken Seite der Stamm aus Cavillon oder Balzi-Rossi. Sie tauschen mediterrane *Tritia neritea*-Muscheln und lange Feuersteinklingen aus. In der Realität sind sich die beiden Gruppen wahrscheinlich nie begegnet. d Sunghir 1 (in der Mitte) und die Sunghir 2–3-Kinder. Alle Kostüme basieren auf den archäologischen Funden aus den Gräbern.



**Fig. 16a–b** Screenshots evoking Pataud 1 (beads)/Cussac Cave in *Ladies and Princes of Prehistory*. a Close up of Fig. 13d. Evocation of the southern-west France group (M. Lacoste and L. Franceschi, who made the Sunghir and Pataud beads, as extras); b L. Franceschi wearing a costume with Pataud beads on the headdress.

**Abb. 16a–b** Bildschirmaufnahmen, die an Pataud 1 (Perlen)/Cussac-Höhle in *Ladies and Princes of Prehistory* erinnern. a Nahaufnahme von Abb. 13d. Lebensbild der südwestfranzösischen Gruppe (M. Lacoste und L. Franceschi, die die Sunghir- und Pataud-Perlen hergestellt haben, als Statisten); b L. Franceschi trägt ein Kostüm mit Pataud-Perlen auf dem Kopfschmuck.

The individual from La Rochette from Hauser's old excavations would have yielded a few horse incisors along the legs or in the hand (Orschiedt 2002).

Scenes were planned to evoke the Cussac burials. The production could not afford to make new costumes for the South-West France scene, so the actors dressed in a mixture of existing or borrowed costumes (Fig. 16). The shells and deer canines of the ochre headgear (made in 2018 for Looking for Sapiens, Fig. 9) were cut off, and rectangular ivory beads (made by L. Franceschi and M. Lacoste) were added to evoke Pataud's finery. The choice of head adornment is arbitrary but consistent with what is known elsewhere for the Gravettian period.

The director (P. C.) would have preferred red costumes to evoke the traces of red colour found in on the walls in Cussac Cave (Jaubert et al. 2020, 181) but because of economical problems only re-use of other costumes was possible.

These traces may hint at the clothing worn when the dead were carried into the cave for funeral rituals or may have been left by those who produced the engravings in the cave.

The South-West France individuals are also visible on the general map (e.g. see Fig. 13d) where a man and a woman (one couple per site) were filmed in the green screen studio.

### Other Gravettian burials

Other countries or geographical areas have yielded Gravettian burials not mentioned in the Arte movie: the Red Lady of Paviland, West Glamorgan, Wales; the Lapedo child of Lagar Velho, Leiria District, Portugal (whose ornaments are very reminiscent of those in Italy); two very poorly preserved child burials in the Ardèche region, south-east France (Figuier 1, St. Martin d'Ardèche, and Marronnier 1, St.-Remèze; Slimak/Plisson 2008; Onoratini/Combier 1995); and a more recent discovery in Mollet Cave, Catalonia (Spain)<sup>10</sup> (cf. Fig. 6; Soler et al. 2013).

Further east in the Russian Baikal region, the burial of the Mal'ta 1 child, Oblast Irkutsk, is also dated to a final phase of the MUP.

<sup>10</sup> Not in our study. We found this information too late to add it.

P. Coste 2025		Ivory	Bones	Teeth
				deer or reindeer      carnivores
Abr	Name of remains	»rods« rings/bracelets Ovale pendant rectangular pendant assymetric pendant bilobated bead Ivory washer rounded and flat beads other pendant	punch or drumstick bone washer fish vertebra artic fox bones tail diadem head of femoral pierced	reindeer canine deer spit deer spit marked bovid incisor horse tooth mammoth molar washer bear canine artic fox canine fox's incisor wolf canine canine of carnivore not specified
Pavd	Paviland 1	40-50 2 fgt.	1?	2
CM	Cro-Magnon 1-5-4 (8)	2		1      1
Pat	Pataud 1-2	94		1**
Roch	La Rochette 1*			x
Fig	Le Figuier 1			
Marr	Le Marronnier 1			
LV	Lagar Velho 1			4
BC1	Cavillon 1		1	63
BT1	Baouso da Torre 1			4 or +
BT2	Baouso da Torre 2			7      1
GE4	Grotte des Enfants 4			x
GE5	Grotte des Enfants 5			

**Conclusion**

Producing re-enactment costumes involves financial and archaeological compromises, as well as visual choices. The detailed shapes of the Palaeolithic garments will always remain unknown to us. However, to counter the clichéd caveman garb of caricatures, it seems important to make ›honest‹ reconstructions, to use S. Quertelet's term (2010).

The place and choice of adornments on the garment and the choice of post- or ante-mortem use of the red colour on the body or clothes have led to richer, warmer and more elaborate clothing designs than are usually seen in reconstructions of Palaeolithic lifeways.

In *Ladies and Princes of Prehistory*, the wealth and diversity of Gravettian burials was a marvellous source of information for gauging the potential variety of Upper Palaeolithic clothing – available for the relatively short period of roughly 10000 years known as the Gravettian – dress conventions that had spread over a vast geographical area in Eurasia. We can thus imagine regional fashions suggesting local traditions and tribes (cf. Fig. 13d). Given the vast regional spread and the temporal depth included in the MUP, the diverse spectrum of clothing evidence offers a far more coherent image of past hunter-gatherer societies than that of a continuous homogeneity and uniformity.

Even though we must emphasise that the garments used for the *Ladies and Princes of Prehistory* documentary remain to some degree hypothetical, we also underscore that these reconstructions are consistent with the archaeological evidence, both regarding the period and the regional differences addressed in the documentary. This approach deserves to be more widely used in documentaries, museography, and films and – it is to be hoped – with more resources and, wherever possible, precise references in the reconstructions.

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Shells and gastropods							Stone
globular	bivalves	longs	›round and sharp‹	vulva			
<i>Littorina obtusata</i>							
<i>Littorina littorea</i>							
<i>Theodoxus</i> sp.							
<i>Tritia neritea</i>							
small gastropod							
gastropod <i>Arianta arbustorum alpicola</i>							
<i>Cardium edule</i>							
<i>Glycymeris violascens</i> or sp.							
<i>Pecten</i>							
<i>Tympanos-cintus fossil</i>							
<i>Dentalium</i> (F = fossil)							
<i>Cerithium</i>							
<i>Turritella communis</i>							
<i>Nassa incrassata</i>							
<i>Nassa reticulata</i>							
<i>Buccinum corniculatum</i>							
<i>Columbella rustica</i>							
<i>Melanopsis</i>							
<i>Fusus (colus)</i>							
<i>Nassarium circumcinctus</i>							
<i>Phallium</i> sp.							
<i>Purpura (nucella) lapillus</i>							
<i>Cypraea</i> sp., or <i>Zonaria pyrum</i> or <i>Luria lurida</i>							
<i>Trivia europea</i>							
marl perced disc							
stone washer							
schist pendant							
sea urchin pierced							
xx	300		2 or +	1	x		
			3**			x**	
		1					
	1	1		1			
2							
	300						
	103			10	8		
	133 or +	1	2	x x 20	6 52		
	x						
	x						

Continued on the next page

P. Coste 2025		Ivory						Bones					Teeth														
													deer or reindeer					carnivores									
Abr	Name of remains	»rods«	rings/bracelets	Ovale pendant	rectangular pendant	assymetric pendant	bilobated bead	Ivory washer	rounded and flat beads	other pendant	punch or drumstick	bone washer	fish vertebra	artic fox bones tail	diadem	head of femoral pierced	reindeer canine	deer spit	deer spit marked	bovid incisor	horse tooth	mammoth molar washer	bear canine	artic fox canine	fox's incisor	wolf canine	canine of carnivore not specified
GE6	Grotte des Enfants 6																										
BG2	Barma Grande 2				3	1						xx						16									
BG3	Barma Grande 3				1	1						x															
BG4	Barma Grande 4				x	1						x						x									
BG5	Barma Grande 5				3							x					2										
BG6	Barma Grande 6																										
AC1	Arene Candide 1				2	2											2										
Ost1	Ostuni 1*																1										
Ost2	Ostuni 2*																x										
Pag15	Paglicci 15 or II*																40										
Pag25	Paglicci 25 or III																8										
Par2	Parabita 2																29										
KWA	Krems-Wachtberg A*		53																								
KWB	Krems-Wachtberg B*																							1			
KWC	Krems-Wachtberg C*									1																	
Brno2	Brno 2						5				3									11	3						
DV3	Dolní Věstonice 3																							10			
DV4	Dolní Věstonice 4																							42			
DV13	Dolní Věstonice 13*		5-10																				13	x			
DV14	Dolní Věstonice 14*																						4	3			
DV16	Dolní Věstonice 16*																						3-4				
Pred	Předmosti 1-20	x					x																			x	
Pred22	Předmosti 22																							x			
Pred	Předmosti other child		14																								
K15	Kostenki 15																								150		
S1	Sunghir 1*		25	2936																				x			
S2	Sunghir 2*		8	4903			x			1		1												250			
S3	Sunghir 3*		13	5274			x			1																	
S5	Sunghir 5			1																				1			
Malt'a	Mal'ta 1*	1			6		xx	3	1?			1															

\* DNA

\*\* in the level but not associated with the burial

x mentioned but number unknown

xx numerous mentioned but exact number unknown

fgt. fragments

? associated with the deceased or just in the same level ?

or + or more

F Fossil

Shells and gastropods							Stone
globular	bivalves	longs	»round and sharp«			vulva	
<i>Littorina obtusata</i>							
<i>Littorina littorea</i>							
<i>Theodoxus</i> sp.							
<i>Tritia neritea</i>							
small gastropod							
gastropod <i>Arianta arbustorum alpicola</i>							
<i>Cardium edule</i>							
<i>Glycymeris violascens</i> or sp.							
<i>Pecten</i>							
<i>Tympanos-cintus</i> fossil							
<i>Dentalium</i> (F = fossil)							
<i>Cerithium</i>							
<i>Turritella communis</i>							
<i>Nassa incrassata</i>							
<i>Nassa reticulata</i>							
<i>Buccinum corniculum</i>							
<i>Columbella rustica</i>							
<i>Melanopsis</i>							
<i>Fusus (colus)</i>							
<i>Nassarium circumcinctus</i>							
<i>Phallium</i> sp.							
<i>Purpura (nucella) lapillus</i>							
<i>Cypraea</i> sp., or <i>Zonaria pyrum</i> or <i>Luria lurida</i>							
<i>Trivia europea</i>							
marl perced disc							
stone washer							
schist pendant							
sea urchin pierced							
	25 or +						
	x					4	
	x					1	
	x						
	x						
	xx						
	300	xx				2	
	100 or +			x		x	x
						x	
						2	
				1			
	3						
					600F		2 2
		x				x	
					x**F		
							1
							1
						2	1

Tab. 1 Ornaments in Gravettian burials. Material, shape, numbers of beads for each individual or multiple Gravettian burials found with adornment, based on archaeological records.

Tab. 1 Schmuckelemente aus gravettienzeitlichen Bestattungen. Material, Form, Anzahl der Perlen für jede einzelne oder mehrere der gravettienzeitlichen Bestattungen mit Schmuckelementen, basierend auf archäologischen Aufzeichnungen.

Labels	Names of main remains	Site	Location	Country	<sup>14</sup> C age [BP]	Age [cal BP]	Lab.-Nr.	Date of discovery	Bibliography	Burial ?	
K14	K14** Martina Gora	Kostenki	Voronej	Russia	31 700 ± 430	38 680–36 260 37 987 ± 665 38 684–36 262	OxA-2395-15	1918 or 1954	Fu et al. 2013; Mounier et al. 2020; Seguin-Orlando 2014; Sikora et al. 2017; Pettitt 2011	X	
	Mladec 1, 2, 3, 8, 9, 11, 12	Mladec		Czech Rep.	31 190 ± 400 (Mladec 1) direct AMS on tooth, -31 680 + 380, -26 330 + 179	36 858–34 461 (Mladec 1)	Vera-3073, Vera-3075, Vera-2736	1881– 1882 and 1922	Henry-Gambier 2007, 111		
	Q116-1**	Goyet		Belgium		35 160–34 440 (Q116-1)	GrA-46175	1860– 1870	Fu et al. 2016		
SI-4	Sunghir 1**	Sunghir	Vladimir	Russia		33 925–31 820			Sikora et al. 2017	X	
	Sunghir 2**					34 600–33 700		1964– 1969		X	
	Sunghir 3**					34 204–33 081				X	
	Sunghir 4**					in S2/S3 burial	c. 34/33 000			1964– 1969	
Pavd1	Paviland 1 «Red Lady»	Pa- viland	Goat's Hole Cave	England	28 870 ± 180 29 490 ± 210	34 163–32 159/ 34 586–33 240	OxA-16412, OxA16413	1823	Pettitt 2011; Richards/Trinkaus 2009, quoting Jacobi/ Higham 2008	X	
	Muierii 1*	Pestera Muierii- lor	Baia de Fier	Romania		34 000, 35 000, late Aurignacian or early Gravettian		1952	Henry-Gambier 2007		
	Cioclovina 1*	Cioclovina	Hunedoara, Bosorod			28 500	32 915 ± 359/ 33 090–31 780	OxA-15527	1941	Fu et al. 2016	
K12	K12** Volkovsaya	Kostenki	Voronej	Russia	23 600 ± 300/ 32 700 ± 700	32 990–31 840 (on skull), or 33 040–31 890 (layer)	GIN 89/GrN 775 layer : GrA5552	1918, 1936/37	Fu et al. 2013; Fu et al. 2016; Henry-Gambier 2008b	X	
CM1 to CM5-4	CM1 »the old man«, CM2, CM3, CM4, CM5-1, CM5- 2, CM5-3, CM5-4	Cro-Magnon	Les Eyzies	France	27 680 ± 270	32 975–31 080	Beta 157439	1868	Henry-Gambier et al. 2013; Villotte et al. 2019	X	
BT1, BT2, BT3	BT1, BT2, BT3	Baouso da Torre	Balzi Rossi, Ventimiglia	Italy		Aurignacian or Gravettian		1873		X	
GE5, GE6	GE5, GE6	Grotte des Enfants (Fancuilli)					Aurignacian or early Gravettian, before 28,1 kya		1901		X
BG1, BG2, BG3, BG4	BG1, BG2, BG3, BG4	Barma Grande						Early Gravettian		1884, 1892	
DV3	DV3	Dolní Věstonice I	Pavlovské Hills, Moravia	Czech Rep.		30 000–26 000		1949		X	
DV4	DV4					30 000–26 000			1925	X	

Continued on the next page

Labels	Names of main remains	Site	Location	Country	<sup>14</sup> C age [BP]	Age [cal BP]	Lab.-Nr.	Date of discovery	Bibliography	Burial ?
KWA, B, C	KWA*, KWB, KWC + 2 remains?	Krems-Wachtberg		Austria	30850/26580 ± 160	31250–30690 on skull/31172–30260 (b)	Poz-12920 (b)	2005–2007	Fu et al. 2016	X
Vilh1	Vilhonneur 1	Vilhonneur	Grotte des Garennes Charente	France	27010 ± 210 (Rib18)/ 26690 ± 190 (Rib 17)	31192–30932, 31319–30790 (Rib 18, AMS direct)/ 31032–30767, 31155–30611 (Rib 17, AMS direct)	Beta216141 (Rib 18), Beta 216142 (Rib 17)	2005	Henry-Gambier 2007; Foucher 2019	X
S5	Sunghir 5	Sunghir	Vladimir	Russia	26042 ± 182	30978 (99,7%) 29910			Sikora et al. 2017	
DV13, 14, 15	DV13, 14, 15	Dolní Věstonice II	Pavlovské Hills, Moravia	Czech Rep.	26640 ± 110, 24000 ± 900	31155 ± 85/ 31070–30670	GrN-14831/ ISGS1616	1986	Fu et al. 2013; Fu et al. 2016	X
DV16	DV16**		Pavlovské Hills, Moravia	Czech Rep.	25570 ± 280 on charcoal	30710–29310		1987	Fu et al. 2016	X
K15	K15 Gorodsov	Kostenki	Voronej	Russia	25700 ± 250/ 21720 ± 570	30865–29170/ 27788–24191	GIN 8020/ LE 1430	1952	Henry-Gambier 2008b	X
BG5, BG6	BG5, BG6	Barma Grande	Balzi Rossi, Ventimiglia	Italy	24800 ± 800 (BG6)	-31090 – -28090 on metatars (BG6)/ 31699–27075	OxA-10093	1894	Formicola (2015); De Lumley et al. 2016,	X
Pav1I	Pavlov 1*	Pavlov	Pavlovské Hills, Moravia	Czech Rep.		31160–27460/ 31110–29410	GrN-20391	1954–1957	Fu et al. 2016	X
PagII	Paglicci 15 ou II ou 12	Paglicci	Rignano Garganico	Italy	24720 ± 420, 24750 ± 370	30279–27729, 30110–27798				X
Cus	L1, L2, L3	Cussac	Cadouin	France	25120 AMS direct on rib	29704–28714, 29335–28981, 29500–28835	Beta 156643	2000	Aujoulat et al. 2002; Villotte 2019	X
Ost1	Ostuni 1a,** 1b	Ostuni	Santa Maria di Agnano	Italy	24410 ± 320, 27614 (b)	29840–27725	Gif 9247 (first dating)	1991	(a) Palma di Cesnola 2002, 274; (b) Fu et al. 2016	X
Ost2	Ostuni 2					29310–28640		1991	Fu et al. 2016	X
Four	Fournol 85*	Fournol	Solutrac, near Fumel Lot	France	24820 ± 220	29108–28620, 29410–28415 on human fgt	Lyon-9985	1986–2015/17	Morala 2017; Villotte et al. 2019	
Mol	Mollet III (MIII 379, Gerona Mollet III SN,4)	Mollet III Cave Serinyà	near Reclau Viver, Mollet, Pau and Arbreda	Spain	22330 ± 90 direct AMS	25008–24426	GrA-43783	1972	Soler et al. 2013	?
LV1	Lagar Velho 1 or Lapedo Boy	Lagar Velho	Lapedo Valley	Portugal	24360 ± 220/ 24860 ± 200	29199–27802/ 29951–28538	OxA8422 / GrA1310	1998		X

Continued on the next page

Labels	Names of main remains	Site	Location	Country	<sup>14</sup> C age [BP]	Age [cal BP]	Lab.-Nr.	Date of discovery	Bibliography	Burial ?
PagIII	Paglicci 25 or III	Paglicci	Rignano Garganico	Italy	23470 ± 370, 23040 ± 380	28992–26849		1971, 1988/89		X
Brno 2	Brno 2 also called »Francouszka street«	Brno		Czech Rep.	23680 ± 200 direct dating	28631–27305	OxA-8293	1885, 1891		X
AC1	Arene Candide 1	Arene Candide	Finale Ligure	Italy	23440 ± 190 AMS dating on femur	28258–27207	OxA-10700	1942	De Lumley et al. 2016, 438	X
Pred	Předmosti 3, 22	Předmosti		Czech Rep.	23340 ± 120	27831–27261		1894		Multiple
Roch	La Rochette 1	La Rochette	Saint-Léon-sur-Vézère	France	23630 ± 130	27780–27400, 27843–27634, 27962–27516	OxA-11053	1910	Foucher 2019; Orschiedt 2002	X
Par1-2	Parabita 1–2	Veneri Parabita	Apulia		22220 ± 360/ 22110 ± 330	27677–25637/ 27406–25550		1958		X
BC1	Cavillon (Barma del Caviglione)	Cavillon	Balzi Rossi, Ventimiglia	Italy	28780 ± 560, -22260 ± 270, 22220 ± 320, -20220 ± 260 = env 24000 on shell/like layer D Mochi	-33670–31190, -26610–24930, -26660–24780, 23820–22450 (on shell)	GifA88202/ GifA88317/ GifA 88337/ GifA 88316	1872	De Lumley et al. 2016, 314; 437; 438	X
Mar1	Le Marro-nier 1	Le Marro-nier			Gravettian			1969	Onorati/Combier 1995; Gely 2005	X
Fig1	Figurier 1	Figurier	Saint-Martin-d'Ardeche	France	Recent Gravettian (Noallien?)			1947	Slimak Plisson 2008; Quechon 1976; Gely 2005; Onorati/Combier 1995	X
GE4	GE4	Grotte des Enfants (Francuil)	Balzi Rossi, Ventimiglia	Italy	28100 similar to findings from Level 23 Grotte Paglicci, therefore early Gravettian (a) or recent Gravettian burin type Noailles (b)				(a) De Lumley et al. 2016, 314; (b) Palma di Cesnola 2002	X
P1, P2, P3, P4, P5, P6	Pataud 1–6	Pataud	Les Eyzies	France	22000 ± 600	28280–24327		1958	Nespolet et al. 2013; Nespolet et al. 2015; Villotte 2019	X
K18	K18 Khvoiko	Kostenki	Voronej		21020 ± 180	27840/ 25905–24636	OxA-7128		Richards et al. 2001 Reynolds et al. 2017	X
K2	K2 Zamiat nin	Kostenki	Voronej	Russia	20500 ± 110	25.1–24.3 kya	OxA-40272			X
Mal'ta	Mal'ta 1	Mal'ta				24520–24090		1952– 1980	Fu et al. 2016	X

\* DNA \*\*DNA and phenotypic infos

Early Upper Palaeolithic	Early Gravettian	Middle Gravettian	Recent Gravettian	Late Gravettian	Gravettian
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**Tab. 2** Database of Gravettian human remains. Labels, names, location, dates in BP, dates in cal BP, date of discovery for all the burials and individuals remains dated from -34 kya to -24 kya cal BP. In blue, new calibrations made for this study with Oxcal IntCal 20 (intcal10.14c) at 99.7% in March 2024 from non-calibrated BP date.

**Tab. 2** Datenbank der gravettienzeitlichen menschlichen Überreste. Kennzeichnungen, Namen, Orte, Daten in BP, Daten in cal BP, Datum der Entdeckung für alle Bestattungen und Individuen, die zwischen -34 kya bis -24 kya cal BP datieren. In blau sind die neuen Kalibrierungen dargestellt, die für diese Studie auf Oxcal IntCal 20 (intcal10.14c) im März 2024 auf Grundlage nicht kalibrierter BP-Daten vorgenommen wurden (99,7% Wahrscheinlichkeit).

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- 1 A. Swieder, LDA, after P. Coste; basemap: GTOPO30/SRTM Courtesy of the U.S. Geological Survey (USGS), the National Aeronautics and Space Administration (NASA), and the National Geospatial-Intelligence Agency (NGA), publicly available; water features created using Natural Earth; free vector and raster map data @ [naturalearthdata.com](https://naturalearthdata.com)
- 2 P. Coste; after Noiret 2013; Goutas 2013; Djindjian et al. 1999; Otte 2013; Pettitt 2011; Gambier 2008; Delporte 1962; Simonet 2012; Kozłowski 1992; Jaubert 2018
- 3 map by B. Janzen, LDA; 3B.picture of BT2 in Coste 2016, courtesy of the Musée d'Archeologie Nationale of Saint-Germain-en-Laye, France by the museum photograph in 1970's or 1980's, others pictures of the casts of the burials

- Malerba/Giacobini 1992; Malerba/Giacobini 2014
- 4 B. a. from Teschler-Nicola et al. 2020, 2. b. From Svoboda 2010, 58 (photo by J. Svoboda 1986) c. From Maska
- 5 B. a. © *Enfant Sauvage Productions/Arte TV* 2021. b. from L. Lartet 1868, 342
- 6 B. a, c. From N.O. Bader in *Trinkaus/Buzhilova* 2018. 3C-4C-5C-6C. Drawings from Coste 2016
- 7 From Coste in prep.; 13–32 Diverse web sources (shells and teeth); 33a Valoch 1996; 33b from Kozłowski 1992, 56–57
- 8 1–12 From Coste in prep. 1 from White 1993, 295; 2 from Nespoulet et al. 2013; 3–6 Malerba Giacobini 1992; Malerba Giacobini 2014; 7 Teschler-Nicola et al. 2020; 8–9 Cro-Magnon from Baker et al. 2022; 10–11 screenshots from

- Ladies and Princes of Prehistory*; 12 © Oxford University Museum of Natural History <<https://oumnh.ox.ac.uk/sites/default/files/oumnh/images/media/red-lady-bones-2.png>> (08.08.2025); 13 Verneau 1900, 74
- 9 © A. Gabillard, costume designer
- 10 M. Lagarde, costume designer,
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Tab. 1–2 P. Coste

## Source of figures

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