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The end of the Ice Age in southern Europe: Iberian images in the Palaeolithic to Post-Palaeolithic transition

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ABSTRACT
The documentation of Palaeolithic art in the open air, together with direct dates for parietal art and the study of territories marked by the last hunter groups in southern Europe, supports new interpretations of Palaeolithic art and its continuity in the early Holocene. We provide updated information about the graphic representations in that time of transition, grouped under the term Style V. We also reflect on the chronological framework of some themes and techniques for which dates are available, from the Upper Palaeolithic to the Neolithic. These topics reveal the strength of the Palaeolithic background in more recent versions of prehistoric art, especially the schematic art associated with the first farmers. These new considerations are added to the presence of Palaeolithic and Post-Palaeolithic art throughout Europe and all over the world, which shows how symbols are social traits of communication associated with human groups. The study of connections through these archaeological items, with their undeniable materiality, is a future challenge that will undoubtedly produce interesting results.

KEY WORDS
Late Palaeolithic images,
Azilian,
caves and rock-shelters,
mobile art,
schematic art,
Neolithic.

RÉSUMÉ
La fin de l'époque glaciaire en Europe méridionale : images d'Ibérie à la transition du Paléolithique au post-Paléolithique.
La documentation de l'art paléolithique de plein air, ainsi que des datations directes pour l'art pariétal et l'étude de territoires marqués par les derniers groupes de chasseurs plaident pour de nouvelles interprétations de l'art paléolithique et de sa continuité à l'Holocène. Nous actualisons les informations sur les représentations graphiques de cette période de transition, regroupées sous le terme de Style V. Nous réfléchissons également au cadre chronologique de certains thèmes et certaines techniques pour lesquels des datations sont disponibles, depuis le Paléolithique supérieur jusqu'au Néolithique. Ces sujets révèlent la forte influence exercée par l'expérience paléolithique dans les versions plus récentes de l'art préhistorique, en particulier l'art schématique associé aux premiers cultivateurs. Ces nouvelles

MOTS CLÉS
Images du Paléolithique supérieur,
Azilien,

grottes et abris sous roche, art mobilier, art schématique, Néolithique.

considérations s'ajoutent à la présence de l'art paléolithique et post-paléolithique à travers l'Europe et dans le monde entier, ce qui montre que les symboles constituent un mode social de communication associé aux groupes humains. L'étude des connexions entre ces sujets archéologiques, avec leur matérialité indéniable, est un futur défi qui produira, sans nul doute, d'intéressants résultats.

INTRODUCTION

The development of Palaeolithic art research established a series of topographic and chronological patterns for Upper Palaeolithic symbols, in accordance with the classic French ensembles. However, the discovery and study of outdoor Palaeolithic sites in central and western Iberia raised new questions. The open air art contradicted both the topographic model (i.e., caves are not the only decorated Palaeolithic sites) and the established chronology (i.e., symbols did not disappear after the end of the Upper Palaeolithic), which had been widely accepted for Upper Palaeolithic images in Europe (Balbín Behrmann & Bueno Ramírez 2009; Bahn 2015).

This is the first time since the discovery of Altamira's cave that the interpretation of Upper Palaeolithic symbols has been simultaneously questioned from different perspectives: open air art expressions, older dates than suspected and the long-term persistence of these manifestations. The discovery of Palaeolithic graphic expressions throughout the world has further underscored these factors.

These changes require a series of reflections, for which the panorama of research in Iberia offers clear advantages owing to its long tradition in Palaeolithic art studies. Additionally, Iberia possesses a larger number of decorated Palaeolithic, Epipalaeolithic, Neolithic, Chalcolithic, Bronze Age and Iron Age sites than any other studied region in Europe (Breuil 1933-1935; Acosta 1968; Beltrán 1968; Bueno Ramírez & Balbín Behrmann 1992, 2009a; Bueno Ramírez *et al.* 2004, 2007a, 2016a; Martinez García 2006; Luís 2009; Royo Guillén 2009; Utrilla-Miranda 2013; Villaverde Bonilla 2015; Santos *et al.* 2015, among others). Additionally, several archaeometric studies have been carried out to obtain direct dates, either for layers of calcite or organic pigments by C14, at Upper Palaeolithic, Epipalaeolithic and late prehistoric sites (Corchón *et al.* 1996; García Diez *et al.* 2000; Sanchidrián Torti *et al.* 2001; Carrera Ramírez & Fábregas Valcarce 2002; Steelman *et al.* 2005, 2017; Ruiz López *et al.* 2006, 2012; Alcolea Gonzáles & Balbín Behrmann 2007; Bueno Ramírez *et al.* 2007b, 2019; Aubry & Sampaio 2008; Aubry *et al.* 2010; Pike *et al.* 2012; Viñas-Vallverdú *et al.* 2016; Hoffmann *et al.* 2018; Morgado *et al.* 2018).

But placing the Iberian historiography within a more global panorama is rather complicated (Bueno Ramírez & Balbín Behrmann 2009a). Levantine art and macroschematic art have been interpreted as responses from the peninsular east to the arrival of the western Mediterranean Neolithic. Schematic art would be the extended version of the symbology of these colonizers (Martí Oliver & Hernández Perez 1988; McClure *et al.* 2008). The contextualized discoveries evaluated in this text propose wider panoramas than those that frame these "singularities". Levantine, macroschematic and schematic would not be rigid specializations, but somewhat contemporary graphic expressions with a greater geographic extension than those leading up to the year 2000 (Bueno Ramírez & Balbín Behrmann 2009a, 2009b, 2016; Martinez García 2013). Between the 13th and 8th millennia BP, symbols with strong Paleolithic roots are arranged on movable and parietal artefacts.

The current situation has supplied evidence for the symbolic transformations of the early Holocene, demonstrating the importance of some regions in Iberia that were not previously considered in assessing Palaeolithic and Neolithic cultures. The weight of the Palaeolithic tradition in the range of early Neolithic symbols, whose topographic and technical continuity with earlier forms in the same territory is unquestionable, creates a new and powerful momentum within the study of prehistoric occupations in "supposedly" marginal areas of Iberia (Bueno Ramírez 2009, 2016, 2018).

LATE ICE AGE HUNTERS' SYMBOLS IN EUROPE

To explain what is known about the images that characterise the transitional periods between the Upper Palaeolithic and the Neolithic, we should acknowledge the historiographic differences between places in southern Europe with an abundance of Palaeolithic art (France, Spain, Portugal and Italy) and regions in the north (United Kingdom, Finland, Denmark, Russia and the central European plains, Croatia and Romania). In the former countries, the end of the Upper Palaeolithic and the start of the Mesolithic are associated with a population and cultural decline that would explain the arrival of Neolithic colonists, bringing new symbolic references after the loss of the "spectacular" cave art (Martí Oliver & Hernandez Perez 1988). In the latter areas, the scarce representation of Palaeolithic art in caves was replaced by rich portable art, whose survival in Neolithic times has been noted in recent years (Hansen 2001; Hofmann 2017; Plonka 2019; Bueno Ramírez 2021). A general summary would compare parietal cave art in southern Europe, which disappeared around the 10th millennium, to portable art of undoubted antiquity and continuity in the Upper Palaeolithic, Epipalaeolithic and Holocene cultures in northern Europe. However, this striking dichotomy is being questioned, as decorated caves continue to be found in continental Europe (Pakhunov *et al.* 2014; Devlet *et al.* 2018; Carciumaru *et al.* 2019; Ruiz-Redondo

Fig. 1. — Epipaleolithic and Mesolithic sites In Iberia, updated from Bueno-Ramírez 2018 including any sites cited in this text.

et al. 2019), and portable art with a prolonged chronology and clear Palaeolithic influence is being documented in unexpected southern European areas (Fugazzola Delpino 2001; Mussi 2012; Simón Vallejo *et al.* 2012; Figueiredo *et al.* 2014, 2016; García Diez & Cacho 2015; Boriç & Cristiani 2016; Naudinot *et al.* 2017; Paris *et al.* 2017; Santos *et al.* 2018).

The climate and cultural changes that took place after the retreat of the last glaciers are increasingly well understood (Gamble *et al.* 2004; Bicho *et al.* 2010, 2011; Rellini *et al.* 2013; Oliva *et al.* 2018; Roberts *et al.* 2018). However, some of the interpretive models for this period still ought to be revised. This is especially true of the depopulation hypothesis in southern Europe, regarding the precise areas where climate first improved and created optimal conditions for the expansion of easily-hunted woodland species and plants, which provided more food options (Fernandez López de Pablo *et al.* 2019). The population at outdoor sites (Araújo 2003; Fernández López de Pablo *et al.* 2011; Angevin 2012; Schwendler 2012; Dumarçay & Caron 2010; Peeters & Momber 2014; Canals *et al.* 2014; Naudinot *et al.* 2014; Sterling 2015; Vialou 2015; Jones 2016; Bergadà *et al.* 2018), as well as the number of graphic representations with territorial impact (Bahn 1982; Conkey 1990; Mangado *et al.* 2010; Gárate Maidagán *et al.* 2015; Ruiz-Redondo 2016; Fuentes 2017; Man-Estier & Paillet 2019; Fuentes *et al.* 2019), increased during the Magdalenian. Funerary sequences that, at some sites, reach the 8th millennium BP should also be considered in this context (Gibaja *et al.* 2012, 2015; Fernández López de Pablo *et al.* 2013; Grünberg 2016; Peyroteo 2016; Bicho *et al.* 2016; Orschiedt 2018; Bueno Ramírez *et al.* 2018; Domingo *et al.* 2018; Sparacello *et al.* 2018; Zagorska *et al.* 2018). Archaeological research supports these records' potential and extends our image of early Holocene hunter sites to cover the whole of Iberia (Bueno Ramírez *et al.* 2007a, 2009, 2016b; Rodanés Vincente & Picazo Millán 2009; Arias *et al.* 2009; Vidal & Prada 2010; Aubry *et al.* 2010; Bicho *et al.* 2010, 2011; Cerrillo Cuenca & González Cordero 2011; Fernández López de Pablo *et al.* 2011; Cacho *et al.* 2012; Villaverde Bonilla *et al.* 2012; Araújo 2013; Canals *et al.* 2014; Monteiro-Rodrigues 2015; Gibaja *et al.* 2015; Jackes & Lubell 2016; Terradas Gibaja *et al.* 2016; Juan-Cabanilles & Martí 2017; Bergadà *et al.* 2018; García-Puchol *et al.* 2018; Hernanz *et al.* 2018; Sousa *et al.* 2018; Araújo *et al.* 2019; Gameiro *et al.* 2020, among others) (Fig. 1).

Different cultures associated with the generic Mesolithic – from hunter-gatherer groups affected by the Neolithic at a later date to those who directly accepted Megalithism (Case 1976) – are distributed between the Atlantic seaboard and the central-northern European continent. Recent studies demonstrate that both situations are more complex, with parietal and

Fig. 2. — Open air Palaeolithic art in northern Europe: **A**, engraved panel from Hunsrück, Germany, according to Welker 2016; **B**, Tumlehed panel from the island of Hisingen, according to Schultz-Paulsson *et al.* 2019; **C**, panel of Vingen's site, Bremanger, western Norway, according to Lødøen 2014. Scale bar: 50 cm.

portable art in the late Upper Palaeolithic and in the Mesolithic. This is the case of Finland, Denmark, Netherlands, Germany and the Russian plains, where paintings and sites with portable art have been found, in addition to outdoor engravings (Bradley *et al.* 2002; Seitsonen 2005; Pike *et al.* 2005; Fiedorczuk *et al.* 2007; Bahn *et al.* 2009; Margarit 2010; Goldhahm *et al.* 2010; Langlais *et al.* 2010; Verhart & D'Errico 2012; Veil *et al.* 2012; Hansen 2014; Bahn 2015; Verhart 2015; Welker 2016; Jungklaus *et al.* 2016; Osipowicz *et al.* 2017; Niekus & Amkreutz 2019; Schulz-Paulsson *et al.* 2019) (Figs 2-4).

Some findings confirm the role of organic materials as supports (Es & Casparie 1968; Andersen 2013; Skreiver *et al.* 2017; Jonuks 2019). The spectacular statue at Shigir, Russia, dated in the 11th/10th millenia BP (Savchenko *et al.* 2015; Zhilin *et al.* 2018: 11) is an example that shows the value of large human images, wearing clothing with geometric adornments.

Fig. 3. — Mesolithic mobile art in Northern Europe, decorated amber pebbles. National Museum of Denmark. Scale bar: 5 cm.

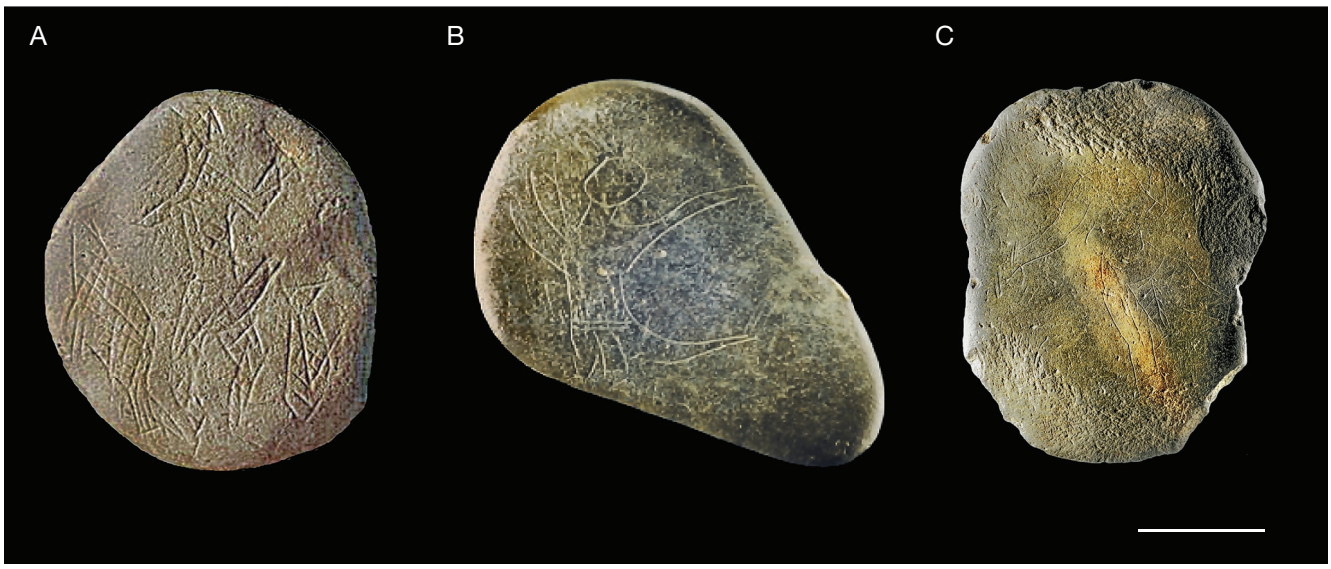

Fig. 4. — Mesolithic mobile art in Northern Europe: **A**, Mesolithic pebble of Ertebölle Horsens Fjord, according to Hansen 2014; **B**, Mesolithic pebble known as "the Dancer of Wansum", Netherlands, according to Verhart 2015, fig. 5; **C**, Geldrop according Verhart & D'Errico 2012. Scale bar: 1 cm.

It is well documented among the first farming communities who raised large stones with an anthropomorphic resemblance. These give new value to the references made by Rust (1943) to ancient wooden menhir at some Maglemosian sites.

Another group of large human representations has been found in the Danube gorges, where settlements of the Lepenski Vir type are accompanied by sculpted stones that combine human figures and depictions of fish (Boriç *et al.* 2018). Dated at the 9th and 8th millennia BP, they are exemplary versions with a powerful local dimension established by Palaeolithic technologies and subjects. Recent studies on the group of graphic expressions at Gobleki Tepe in Turkey point in the same direction, as they refer to the famous site's surrounding territory, with chronologies from the 11th to at least the 8th millennia BP (Celiç 2016).

Furthermore, new data includes the confirmation of Palaeolithic figurines in clay, a raw material normally associated with "neolithisation". Their working methods and their graphic resources are easily perceived in artefacts at Neolithic sites in the area; they consolidate long trajectories that go beyond our current divisions between the Palaeolithic and Post-Palaeolithic (Svoboda 2007; Farbstein *et al.* 2012).

In southern Europe, the understanding of the disappearance of parietal art and the maintenance of Azilian portable art has shifted from Breuil's (1974) hypothesis to more recent interpretations. The association between the last graphic events with Azilian portable art restricted them to those areas where that culture had existed: northern Iberia and southern Gaul.

In both Italy and France, the data has advanced significantly, establishing a wide repertory of C14 dates that make it possible to relate images of portable art with a broad view of parietal art. We will highlight the contemporaneous relevance of different anthropomorphic versions as one of the most informative features (Chollot 1964; Graziosi 1973; D'Errico & Possenti 1994; Tusa 2010) (Fig. 5).

In Iberia, this meant that researchers working in areas where historiography had not recognised the presence of the Azilian – such as the Mediterranean, the centre and west – included all the data corresponding to that very late, decorative phase in a final Magdalenian. This stressed the idea of a marginal nature commonly applied to hunter groups outside the classic areas defined for Palaeolithic art by Breuil (Aubry *et al.* 2010; Bicho *et al.* 2010; Cacho *et al.* 2012).

In that sense, the concentration of Azilian sites in northern Spain meant that decorated portable objects were only identified in that area. In contrast, objects found throughout the Iberian Mediterranean seaboard (Casabó Bernard 2004) were attributed to either the Epipalaeolithic microblade phase or geometric phase, linked to a small autochthonous population of hunters withdrawn to mountain areas (Fortea Pérez 1973).

The geographic and cultural proximity of microblade groups in northeast Iberia to French Azilian industries is now unquestionable (Garcia-Arguelles *et al.* 2005; Mora Torcal & Martínez-Moreno 2009). Similarly, a close relationship existed between material products from those two areas and those of the Italian area, where an increasing number of sites with decorated portable artefacts have been dated to the 13th to 8th millennia BP (Dalmeri *et al.* 2009, 2011; Sparacello *et al.* 2018). These present cultural or graphic connotations are similar to those of the Azilian (D'Errico & Possenti 1994; Dalmeri 1998).

Studies on open air Palaeolithic art sites enabled the characterisation of an Iberian Azilian, in the cultural and connective sense, which included Côa and some sites in the centre, east and south of Iberia, where portable art was also found. Our hypothesis implied abandoning the generic classification of a Late Magdalenian for all these graphic productions. That name was basically a way of accepting a supposed marginal nature that was never proven. The sites in question had not been discovered when those interpretations of the location of

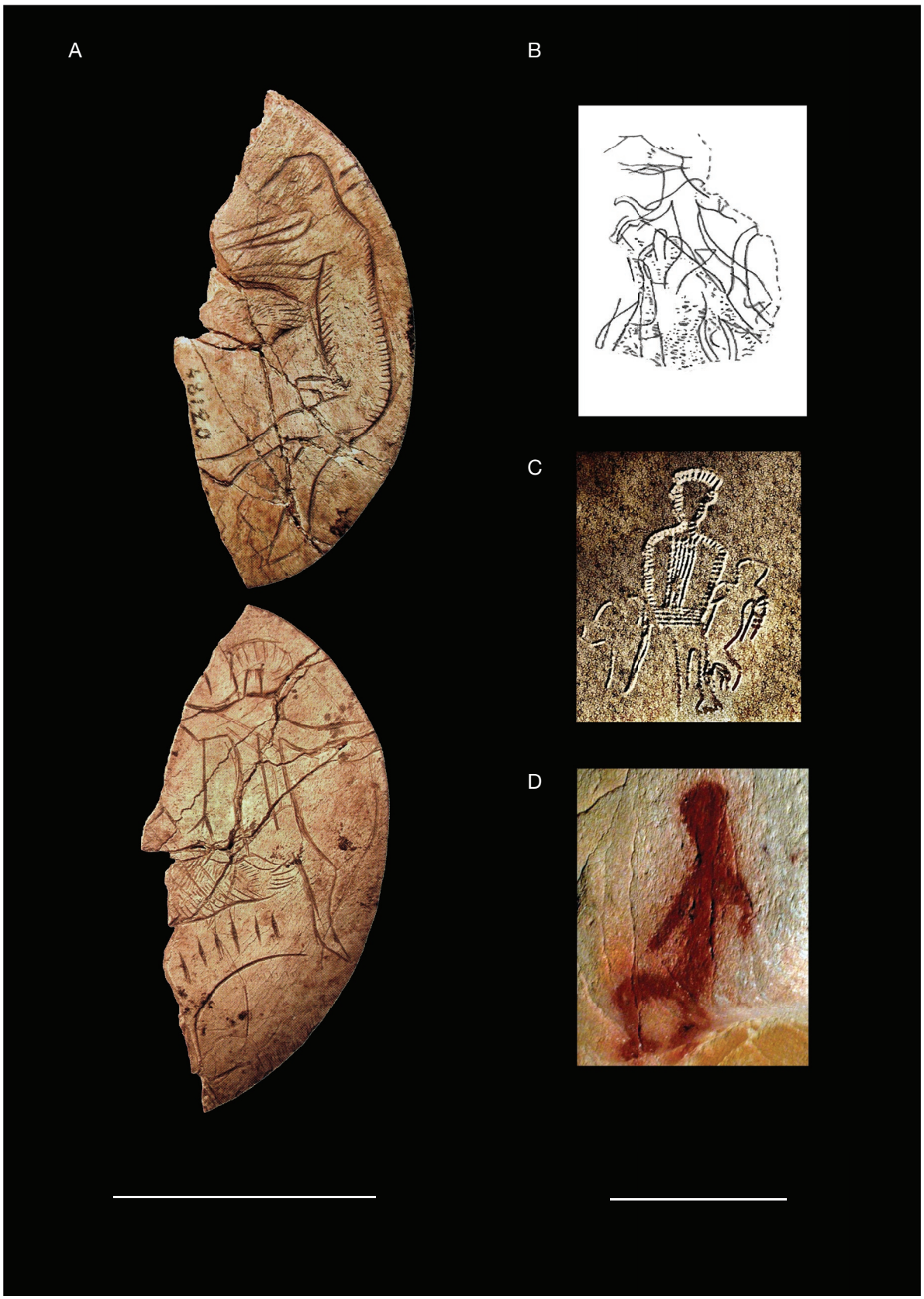

Fig. 5. — Variety of human images: **A**, front and back of a bone disk of Mas d'Azil according to Chollot 1964 (Late Magdalenien); **B**, Vall d'Arancio, according D'Errico & Possenti 1994; **C**, **D**, human images of the Cala dei Genovesi, Levanzo according Tusa 2010. Scale bars: A, 10 cm; B-D, 30 cm.

Palaeolithic hunter groups and their diachronicity in southern Europe were established.

We regarded the materiality of graphic expressions as an inescapable argument for cultural adscriptions, and therefore suggested that the inclusion of the expressions in central and western Iberia within the southern European Azilian was a convincing hypothesis. Therefore, it would create new lines of research into the correlation between the two groups of "hunter societies" (Bueno Ramírez *et al.* 2007a: 576; 2009: 261). This hypothesis has recently been confirmed by researchers at Côa, who admitted our assignation of the Azilian for those sites and their graphic productions. Style V has also been recognised by researchers involved in Levantine art (Aubry *et al.* 2017; Rivero & Ruiz López 2018: 84; Santos *et al.* 2018; Gameiro *et al.* 2020).

The coexistence of canonical Palaeolithic formulae with schematised versions, smaller in size and with fewer details, is indicative of the processes of transformation and resilience in the ensemble of Upper Palaeolithic symbols. These go beyond the characterization of Leroi-Gourhan's four styles. These images have been viewed as an epigone of Palaeolithic art that did not impact the symbols of the first farmers. On the contrary, they constitute a rich niche of study that contributes interpretations for further research on the evolution of graphic behaviors.

Authors who classify these images in the final Upper Magdalenian (Cacho *et al.* 2012; Garcia Diez & Cacho 2015) interpret them in terms of late Style IV. In contrast, other authors would rather separate the more naturalistic productions from the schematic ones and interpret them as Epipalaeolithic art (Guy 1997). In the first case, it should be accepted that late Style IV also includes the static form of naturalistic figures, the tendency toward miniaturisation, rapidity in execution and the schematism of Style V. The second option separates naturalistic and schematic components as two consecutive phases, when evidence shows that these two versions were coetaneous (Lorblanchet 1989).

The addition of a Style V to the final stages of Palaeolithic art fits in Leroi-Gourhan's system, as he did not envisage the styles as a rigid sequence, but as a series of tendencies that could coexist. This latter point has been fully confirmed in regard to the chronologies that we now possess (Alcolea González & Balbín Behrmann 2007). These expressions fit into the concept of a Style V proposed by Roussot (1990), with added interest in the Iberian's direct dates for painted parietal decorations and engraved parietal references, which confirms the continuity of decoration on parietal art. The Iberian Peninsula now provides the most complete data documented in southern Europe and affirms the persistent custom of marking sites with parietal and portable images (Bueno Ramírez 2009; Balbín Behrmann & Bueno Ramírez 2009).

Resistance to the acceptance of a fifth style is probably due to the use of stylistic terminology (Bahn & Lorblanchet 1993; Bueno Ramírez *et al.* 2007a: 556; 2009: 262). Although we are fully aware of the nuances that the current state of our knowledge adds to stylistic nomenclature, a situation that was unimaginable a few years ago has given it new value. We refer to the discovery of Palaeolithic art in regions outside Europe or beyond classic sites of Palaeolithic art caves (Henshilwood *et al.* 2002, 2018; Balbin Behrmann & Alcolea González 2006; Pessis *et al.* 2010; Huyge *et al.* 2011; David *et al.* 2013; Aubert *et al.* 2014, 2019; Rifkin *et al.* 2015; Bahn 2016; Carciumaru *et al.* 2019). The generic adscription to the early styles (I-II) or recent ones (III-IV) has enabled the correct classification of those sites, as the obtained chronologies have demonstrated. At some of these sites, the style of their figures suggests continuities in the symbols from the end of the Upper Palaeolithic to later cultures, which match the stylistic formulae defined for Style V (Hovers 1990; Yaroshevich *et al.* 2016; Finch *et al.* 2020).

This new data referring to the last hunter-gatherers' symbols can be classified by three spheres: the discovery of new sites that alter the classic picture of where Palaeolithic hunter groups were located in southern Europe and around the world; data on their chronology that confirms their long persistence; and the type of surfaces used, including equally parietal and portable versions. The evidence advises a more enriching discussion about the populations at the end of the Upper Palaeolithic and their impact on Epipalaeolithic-Mesolithic groups, within which the symbologies associated with Neolithic farming societies were generated and developed.

GEOGRAPHICAL UPDATED SPREAD OF STYLE V SITES IN IBERIA: PARIETAL ART

The continuity of parietal art in classic locations for Palaeolithic art was accepted in the case of some schematic images that resembled the paintings on Azilian pebbles. Breuil (1974: 405) identified them in Niaux, Marsoulas, Cantal, Mazaculos, Meaza, Pindal and La Pileta. But in the classic canons of Palaeolithic art they were regarded as disappearing around the 12th millennium BP.

Direct dates for naturalistic and schematic images in the Palomera Cave in Burgos (Corchón *et al.* 1996) revealed a more prolonged duration of parietal cave art (Bueno Ramírez *et al.* 2007a, 2009). This evidence was ignored, undervalued or simply discarded, as it did not fit in the widely accepted hypotheses about the later stages of Upper Palaeolithic art (Martin 2001, 2007; Chollet & Dujardin 2005; Alcolea González & Balbín Behrmann 2006, 2007; Benard 2010; Guéret & Benard 2017).

Indeed, a more profound study of the diachronicity of caves' use in northern Spain is still pending, as direct evidence for the prolonged use of parietal surfaces continues to accumulate (Moure Romanillo & González Sainz 2000; Fortea Pérez 2002). For example, some ensembles display formal resemblances to Style V (like Clotilde Cave in Cantabria) and direct dates for many figures in the classic canons show that Palaeolithic forms were produced over longer periods of time (Bueno Ramírez *et al.* 2007a: 583; 2009: 285); hence direct dates between the 13th and 8th millennia BP at Pindal, Tito Bustillo, Candamo, El Buxu, Llonín, Castillo, Monedas, Cullalvera, Sotarriza and Ekain. These observations can equally apply to classic French caves with direct dates, like Le Portel and Bedeilhac (*vide* table 1 Alcolea González & Balbín Behrmann 2007).

Fig. 6. — Panel with black painting figures from La Pileta's cave, Málaga, Spain; right: zoomorphs with elongated bodies filled with lines in Style V. Photo: R. de Balbín-Behrmann. Scale bar: 50 cm.

Palaeolithic decorations in Cantabrian caves sometimes share spaces with schematic art, combining images that reveal the long diachrony of these sites. This is true the case of the forms that Breuil connected with the schematic motifs on Azilian pebbles, as mentioned above, and the presence of human and animal figures that can easily be compared with schematic figures in southern Europe (Breuil 1933-1935: 38, fig. 21; Santamaría Santamaría *et al.* 2010). These Palaeolithic art / schematic art graphic sequences are common in other cave or rock-shelter sites, as well as in outdoor sites (Baptista & Garcia Diez 2002; Gomes 2007; Bueno Ramírez 2009; Bueno Ramírez *et al.* 2010; Oliveira *et al.* 2014; Balbín Behrmann *et al.* 2017).

In inland Iberia, beyond the Style V motifs described some years ago (Bueno Ramírez *et al.* 2007a, 2009), we can cite the recently discovered motifs on the walls of the Los Casares Cave in Guadalajara; more precisely, on the lower part of the panels in Chamber A, where rectangular geometric motifs and zoomorphs (mostly horses) are represented with fine incisions. It is noteworthy that horses are quantitatively the most abundant animal among the Upper Palaeolithic images in this cave. Similarly, some of the human figures seem to have influenced more recent representations, which are currently being studied. Other evidence of the parietal use of inland caves is still undergoing research as well.

Scarce knowledge of Palaeolithic caves in southern Iberia has kept similar contents hidden from view. The late Pleistocene dates for some figures in the Escoural Cave (Lejeune 1995; Santos *et al.* 2018) can be added to the attributes of the El Cantal caves in Málaga and other Andalusian sites (Balbín Behrmann *et al.* 2017). Many of these sites had long occupations during the late Upper Palaeolithic, Epipalaeolithic and Neolithic, with rock art stylistically associated with those occupations. One paradigmatic case is La Pileta's Cave, in Málaga, where schematic figures were observed when the cave was first studied (Breuil *et al.* 1915). Some of these representations have been dated directly (Sanchidrián Torti *et al.* 2001). Research being carried out by M. Cortés's team will provide the opportunity to verify the abundance of forms related to Style V, for which direct dates can be obtained, as they are painted in black (Fig. 6). Both ancient and recent styles of Palaeolithic art, Style V and schematic art, are likely to have a long diachrony, revealing La Pileta as one of the key sites for the study of Prehistoric art in southern Europe.

A decorated Palaeolithic cave was found in Galicia (de Lombera Hermida & Fábregas Valcarce 2013; Steelmann *et al.* 2017), which is in line with the increasing number of parietal and portable art sites recently documented in the north of Portugal through a systematic strategy of surveying for that type of site. As in other parts of Iberia, the evidence in caves is supported

by figures found on other rock surfaces (in small rock-shelters or completely out in the open), as well as portable art.

Indeed, Style V parietal art in small rock-shelters is another new aspect of the record, resembling Pleistocene and Post-Pleistocene evidence. This demonstrates that the positional differences for indoor or outdoor expressions are totally outdated (Fig. 7) (Balbín Behrmann & Bueno Ramírez 2009; Bueno Ramírez *et al.* 2012). The Jose Esteves Rock-shelter in Côa already showed the validity of these locations in the Tua rock-shelters and at other sites in the north of Portugal (Sanches & Teixeira 2014; Figueiredo *et al.* 2014, 2020; Santos *et al.* 2015, Teixeira & Sanches 2017). They demonstrated that surveys in Galicia should consider this type of site as one of the most common.

Furthermore, there are panels beneath a small overhang, which is very characteristic of Levantine Art (Martínez Valle *et al.* 2003, 2009, 2014; Utrilla-Miranda & Villaverde 2004; Viñas-Vallverdú *et al.* 2010; Rey Lanaspa *et al.* 2019). However, others are found on natural rock outcrops, where their topographic prominence is their most visible aspect. These are small, hard-to-see panels that reproduce well-known systems in the structure of some painted schematic art pieces.

Data from the rock art sites in Côa has been expanded in recent years, consolidating the hypothesis of a Style V whose images are superimposed on Upper Palaeolithic figures. This is observed at the site of Siega Verde in Salamanca and in the Douro river basin. Ongoing surveys in the area of Siega Verde have resulted in the discovery of decorated rocks within the site itself, including a panel containing numerous Style V figures in the central part of the site. Some new sites have also been discovered: La Salud and Arroyo de las Almas in the Spanish area, and the decorated rock of Redor do Porco in the Portuguese part of the River Agueda. This latter site had only a figure of a bovid in an early Palaeolithic style (Baptista & Reis 2008). The decorated rocks at the bottom of the valley in La Salud contain superimpositions of Style V geometric motifs over Upper Palaeolithic pecked horses, like those at Siega Verde (Bueno Ramírez *et al.* 2007a: figs 5, 6; 2009: 283; Gárate Maidagán *et al.* 2016: fig. 6). Arroyo de las Almas also displays superimpositions of Style V and Palaeolithic figures (Reis & Vazquez 2015; Vazquez Marcos & Reis 2019: 140), together with some outcrops on which only Palaeolithic or Style V art appears. The repertory with caprids and cervids as the most frequent quadrupeds in Siega Verde during these periods also includes some bovids, identical to those on the plaques at Fariseu, and figures of horses (Vazquez Marcos & Reis 2019: fig. 5).

With this increase in open-air rock art, it would seem advisable to intensify documentation at the sites of Domingo García (Ripoll & Municio 1999) and Piedras Blancas (Martínez García 2009), where researchers did not keep up with the ever-evolving state of the art. It would be interesting to investigate the possible existence of archaeological deposits, something that was not completed in Siega Verde due to administrative limitations.

One of the most positive aspects of the conceptual expansion of parietal art to open-air sites is its documentation in areas where other types of sites were primarily researched in the context of Palaeolithic art. In northern Spain, many of the examples in the Nalón valley and Santullano (Asturias) are located out in the open (Balbín Behrmann & Bueno Ramírez 2009: 603). This suggests that it would be possible to find rock art that is completely in the open-air around this region. Indeed, we are currently collaborating on the study of a group of open-air Palaeolithic decorated rocks in the area of Laviana (Asturias).

In the south, Palaeolithic and Post-Palaeolithic graphic sequences have been identified on open air outcrops at sites in the Tagus and Guadiana valleys (Jordá Pardo *et al.* 1999; Collado Giraldo 2006; Gomes 2007; Bueno Ramírez *et al.* 2011). These locations, techniques and even subjects, demonstrate a long tradition employing images as one of the most visible ways to mark territories (Bueno Ramírez 2009). The number of sites has increased considerably, with Style V images in some less well-known sectors of the Tagus river, such as the Zezere river (Baptista 2001). Recent discoveries in the latter area can be found by researchers of the Museum of Fundão (Portugal).

Also in the Tagus, rock-shelters like the one at Almourão (Caninas *et al.* 2016) display small painted representations, which seem to have been repainted more than once. They are situated in geographic areas with many decorated rocks, whose catalogue continues to grow. A similar situation is indicated by Pinho Monteiro's rock-shelter at the Serra da Esperança (Portugal), with Style V paintings and schematic art in the material context dated to the 8th millennium cal BC (Oliveira *et al.* 2014). In the same area, the discovery of new painted rock-shelters (thanks to targeted surveying) has revealed not only Palaeolithic paintings but also Style V figures at sites decorated with abundant schematic art (Bueno Ramírez *et al.* 2006, 2010).

Andalusia and the new research on rock-shelters with schematic art have opened a new panorama, adding several panels of Palaeolithic and Style V resemblance, with references in parietal works inside caves from the same region. One of the most representative motifs is made of double sinuous lines; these are related to macroschematic Post-Palaeolithic art. On the other hand, Palaeolithic sites present symbols associated with Late Magdalenian decorative groups (Fig. 8). This is true of Ardales, La Pileta and Cantal. They have now been identified in other sites with parietal art, as well, such as Cueva del Niño (Balbín Behrmann & Alcolea González 2002, 2006; Gárate Maidagán & García-Moreno 2011). Most importantly, they have been identified at open-air painted rock-shelters, forming a series of figures with deep Palaeolithic roots (Balbín Behrmann *et al.* 2017).

Finally, another new aspect that has been recently unearthed surrounds the techniques used in the rocks' decoration. Techniques were regarded as a differentiating factor between cave and open-air art, but the presence of paintings and engravings in both situations all over the Iberian Peninsula has disproven that argument (Alcolea González & Balbín Behrmann 2007; Bueno Ramírez *et al.* 2012). The current state of our knowledge has unveiled some new nuances: the undoubted conservation of paint/pigments and the raw material of the rock. The degree of absorption in sandstone and limestone is much greater than in schist, which is one factor that must

Fig. 7. — Parietal art of Style V in Iberia: **A**, panel of Jose Esteves rock-shelter (Coa, Portugal), detail of a deer looking to the right, its body filled with lines; note the double line on its back, which can be compared to the plaque from Fariseu, Coa, Portugal; another animal overlaps in the opposite direction; **B**, panel 48 of Siega Verde (Salamanca, Spain): three goats, their bodies filled with lines, they are arranged vertically; **C**, repainted horse from Almourâo rock-shelter (Tagus river, Portugal); **D**, a goat, body filled with lines. Photos: A-C, R. de Balbín-Behrmann; D, Museo de Fundâo. Scale bar: 10 cm.

be accounted for. Another consideration is the relationship between choice of technique and territorial specialisation, as confirmed in late Magdalenian graphic expressions within classic areas. Indeed, the group of plaques from Parpalló is one of the Palaeolithic portable artefact sets that conserve the most amount of paint in Europe (Roldán García *et al.* 2016). Nevertheless, other portable artefact sets with graphic remains do not display such an intensive use of paint (Naudinot *et al.* 2017; Figueiredo *et al.* 2020). It is therefore reasonable to consider technique to define areas of close relationship, which should be studied through more detailed research.

Not only were the classic canons and Style V coetaneous, but also elaborated painting and engraving techniques were also practiced at the same time as more rapid artistic techniques (Obón Zúñiga *et al.* 2019: fig. 13). Some panels of Levantine art, of which Minateda is a good case study (Ruiz López *et al.* 2016), display this variety of technical solutions within the same rock-shelter.

MOBILE ART GIVING CULTURAL AND CHRONOLOGICAL CONTEXT FOR PARIETAL ART

Catalogues of portable art in Iberia have increased in density and number in recent years, especially in areas where they were previously unknown. In the west and central regions, there are large collections like those at Côa and Foz do Medal; smaller but important assemblages like at Estebanvela and more isolated finds that still suggest potentially larger groups: Maltravieso in Cáceres, La Dehesa in Salamanca, the plaque from Villalba in Soria, and the decorated pebbles from Arroyo Manzanas in Madrid (Fabián García 1986; García Diez *et al.* 2012; Balbín Behrmann *et al.* 2016; Hernanz *et al.* 2018). Portable art collections are also growing along the Iberian Mediterranean basin, where some decorated plaques and pebbles have been linked to known objects in such important assemblages as Parpalló and Cova Matutano, or a few sets at

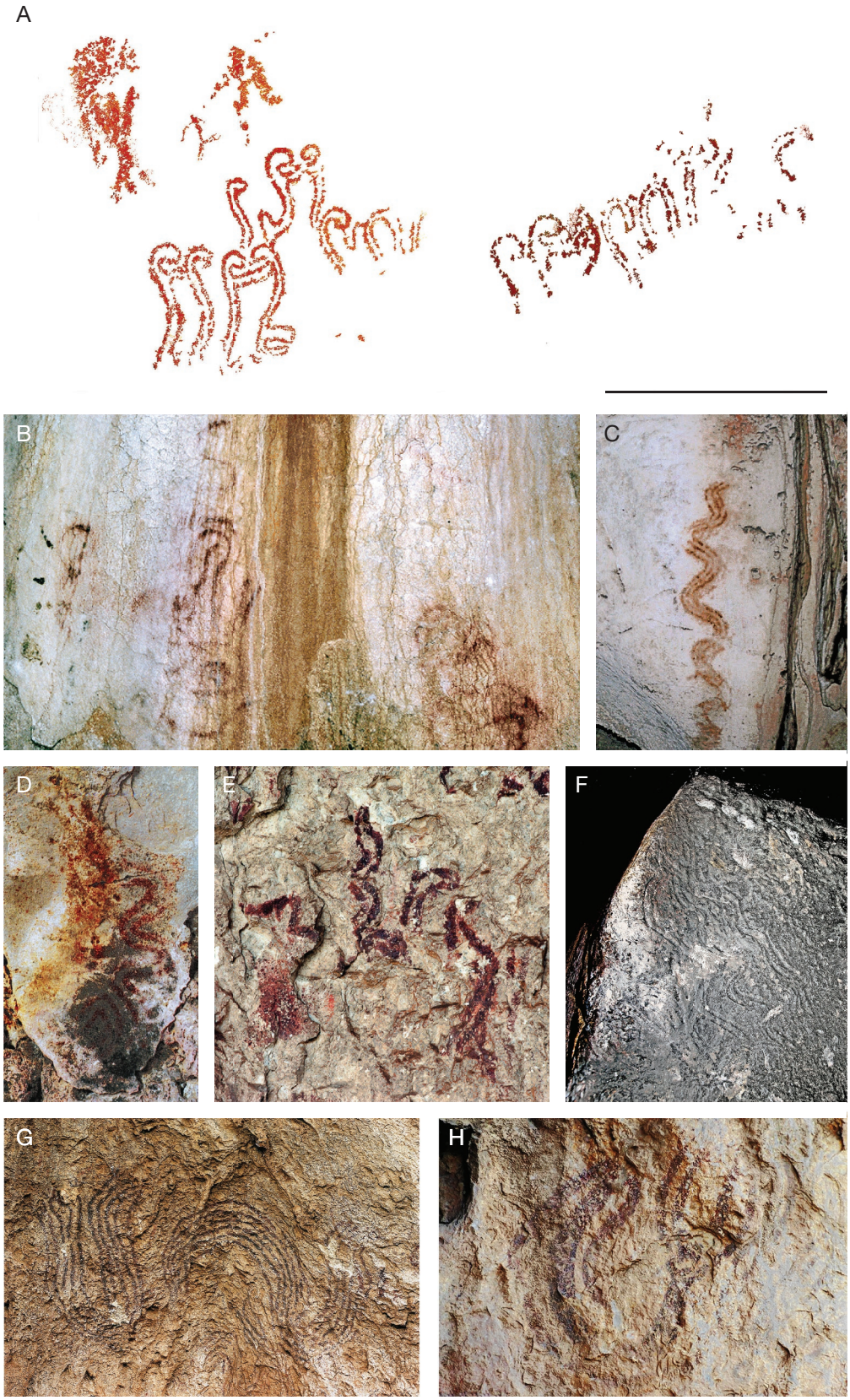

Fig. 8. — Paleolithic references for the so-called macroschematic Iberian art: **A**, paintings of anthropomorphs in double Y and double sinuous lines at Peña Redonda rock-shelter (Córdoba, Spain) according to Bretones García *et al.* 2015; **B**, **C**, two panels of sinuous lines from La Pileta cave, according to Cantalejo *et al.* 2006, figs 46 and 58; **D**, painted double sinuous lines at Laja Alta (Málaga, Spain); **E**, Los Tajos de Lillo (Granada, Spain) rock-shelters according to Martinez García 2013; **G**-**H**, engraved panel with sinuous lines of Ardales cave, (Málaga, Spain); sinuous lines from La Sarga rock-shelter and Barranc de la Famorca V, Alicante, according to Hernández *et al.* 1988. Scale bar: 1 m.

Fig. 9. — Tossal de la Roca (Alicante, Spain): **A**, bone with geometric patterns and *fil de fer* engravings; **B**-**D**, pebbles with zoomorphic engravings. Scale bar: 2 cm. Photos: R. de Balbín Behrmann, courtesy of the Archaeological Museum of Alicante.

Tossal de la Roca (Cacho Quesada & Ripoll López 1987; Villaverde Bonilla 1994; D'Errico & Cacho 1995; Olaria Puyoles 1999; Utrilla-Miranda *et al.* 2009a; Mangado *et al.* 2010; Martinez Moreno *et al.* 2011; García Diez & Vaquero 2015; Fullola *et al.* 2015; Domingo *et al.* 2019) (Fig. 9).

The characterisation of zoomorphic figures on the plaques from the later level 4 at Fariseu exactly correspond to what we had proposed for Style V in the west and centre of Iberia (Bueno Ramírez *et al.* 2007a: fig. 18; 2009: 271, 272; Santos *et al.* 2018: 49). Detailed comparisons in the studies carried out by our colleagues update our proposals and combine data both from classic Palaeolithic art areas, like northern Spain, France and Italy, and the Iberian Mediterranean Spainside, with a chronology between the 13th and 8th millennia BP (Bueno Ramírez & Balbín Behrmann 2016: 470). These must be compared to the evidence described by D'Errico & Possenti (1994) and by Roussot (1990). Altogether, they reveal the same coexistence between naturalism and schematism as in parietal art. Thus, they support the plausible existence of a period for Style V that would demonstrate a continuity of subjects, techniques and use of objects used in Palaeolithic art.

A large number of recent studies (Dalmeri *et al.* 2009, 2011; Fritz & Tosello 2011; Langlais *et al.* 2014; Naudinot *et al.* 2017, among others) extend these portable assemblages to many of the Palaeolithic art sites in southern Europe. They also suggest the need to reassess their parietal art through new archaeometric studies.

Portable art was produced on different kinds of objects, including the classic Azilian pebbles at Estebanvela, Côa, some sites along the Iberian Mediterranean and in the Province of Madrid (Bueno Ramírez *et al.* 2007a, 2009; García Diez & Cacho 2015; Hernanz *et al.* 2018, Santos *et al.* 2018) (Fig. 10). Lorblanchet (1989) noted that at French sites, the decoration on Azilian pebbles was coetaneous with the stone and bone plaques, and this was also true of Italian sites dated in the same period. Geometric decoration and the search for symmetry are common on these supports (Coureaud 1985; D'Errico 1994).

Angular geometric motifs are very common on Azilian pebbles, as well as more sinuous forms. The pebble from Arroyo de las Moreras at Madrid is the first Azilian painted pebble found in inland Iberia (Hernanz *et al.* 2018). It displays patterns well-known in northern Spain and mostly in France (Coureaud 1985). It comes from a site dated at the 10th millennium BP (Pérez González *et al.* 2007: 130).

The scarcity of signs is noteworthy in these portable assemblages, as has also been observed in open-air rock art (Balbín Behrmann & Alcolea González 2002). In contrast, the development of geometric forms is identical in parietal and portable art. Therefore, portable objects are excellent points of reference to date the parietal art (Bueno Ramírez *et al.* 2007a, 2009). Barbed and geometric signs accompanied by *fil de fer* have been documented, as well as groups

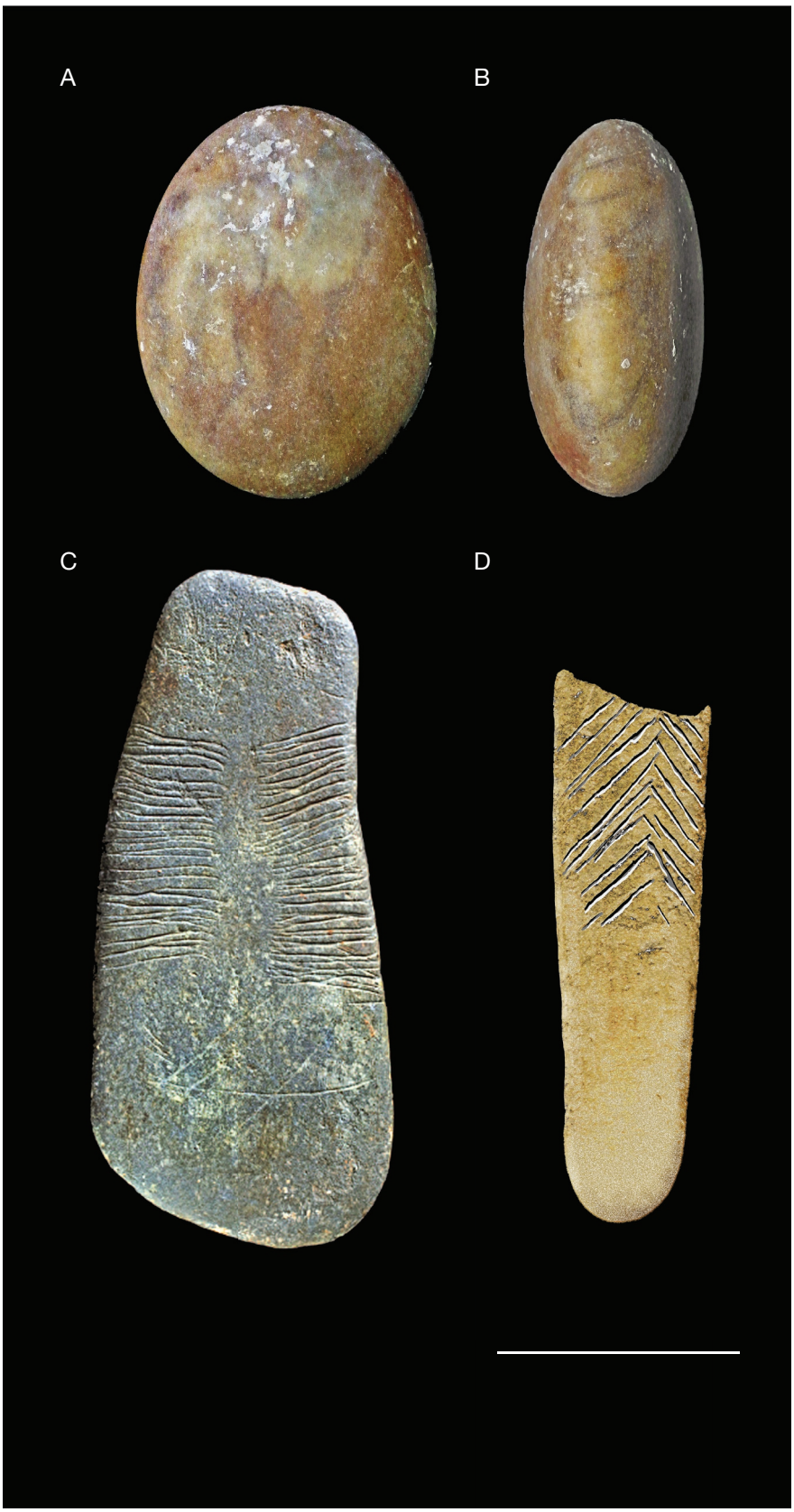

Fig. 10. — **A**, **B**, Arroyo de las Moreras "azilian" pebble (Madrid, Spain) with sinuous line characterized by Raman analysis as hematite, according to Hernanz *et al.* 2018; **C**, **D**, two "Azilian" pebbles of Estebanvela (Segovia, Spain). Scale bar: 10 cm. Photos: A, B, R. de Balbín Behrmann; C, S. Ripoll; D, drawing of another decorated pebble of Estebanvela according Bueno Ramírez *et al.* 2007a.

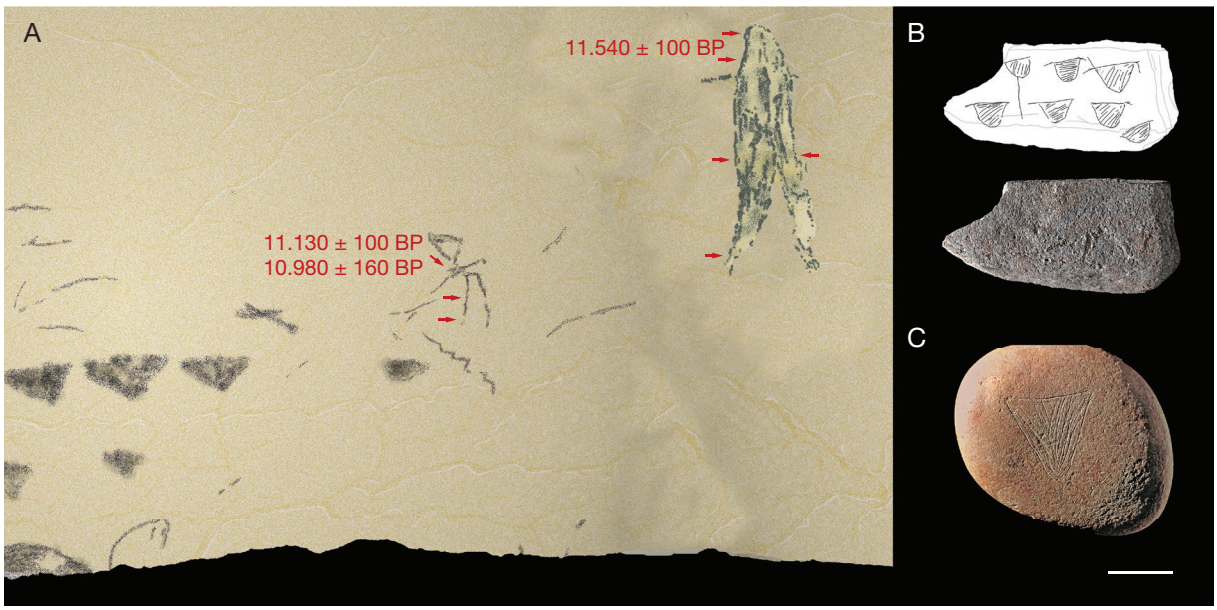

FIG. 11. — **A**, Panel of Cueva Palomera (Burgos, Spain) with black pigments dated by ^{14}C, drawing by Bueno Ramírez *et al.* 2007a; **B**, an engraved pebble from Molí del Salt (Tarragona, Spain) drawing and photo according to García-Diez & Vaquero 2015; **C**, engraved pebble from Bois Ragot's cave (France), according to Chollet & Dujardin 2005. Scale bar: 5 cm.

of lines. Some motifs, such as triangles, appear in rock art, as in the Jose Esteves rock-shelter (Bueno Ramírez & Balbín Behrmann 2009b), and the case of painted triangles dated directly in Cueva Palomera (Corchón *et al.* 1996) (Fig. 11). Documented on pebbles and plaques (Chollet & Dujardin 2005; Guilaine & Evin 2007; García Diez & Vaquero 2015) and dated in the Epipalaeolithic-Mesolithic, they also appear on the decorated walls.

However, some naturalistic decorations that occasionally include human images are also known. This is equally true at Iberian sites, such as the branch-like anthropomorph depicted with the cameo technique on a pebble in the later levels at Fariseu in Côa, which used red paint for its base (Bueno Ramírez & Balbín Behrmann 2009b). The cameo technique is also found at portable art of Dalmeri site (Dalmeri *et al.* 2011). The probable use of fire on the objects to obtain contrasts in the application of pigments (Santos *et al.* 2018: 48) would be a technical solution that has also been noted at French sites of the same age, such as Pont d'Ambon. Here, bones were exposed to fire before being decorated (Paillet & Man-Estier 2014: 153) (Fig. 12).

We can also mention the pebble with an anthropomorph with handle-shaped arms, associated with an animal from Style V, also with a base of red paint from the same assemblage of decorated pebbles at Fariseu (Bueno Ramírez & Balbín Behrmann 2016: fig. 12; Santos *et al.* 2018: fig. 14). The first can easily be compared with the branch-shape typology in parietal schematic art and with impressed images on pottery in the initial Neolithic (Utrilla-Miranda 2013; Bueno Ramírez & Balbín Behrmann 2016: 473-474). It is also closely related to the painted images decorating the stones that accompany the burial at Riparo Villabruna, whose chronology has recently been confirmed (Orschiedt 2018: 12 140 ± 70 B.P). The second is a typical schematic anthropomorph, with head, arms and legs that end in two open triangles. Both figures are dated to the 10th- 9th millennium cal BP at Fariseu (Aubry *et al.* 2010).

The diversity of human images includes figures dated directly at Cueva Palomera in Burgos, with parallels in the open-air assemblage at Côa, on Rock 11 at Vale Escuro and at Faia (Bueno Ramírez *et al.* 2007a, 2009) (Fig. 13). They consist of rectangular bodies with vertical interior lines and raised arms and legs with feet ending in rigid lines. They are like those that characterise some of the macroschematic figures. Other plaques at Fariseu provide further evidence, such as the image engraved on another fragment at the same level (Santos *et al.* 2018: fig. 4,4) with the upper part of the torso of a dressed person with a round head and lines that radiate from it, again in a manner related to macroschematic figures (Fig. 13).

In the Iberian Mediterranean basin, thick red lines on the plaque from Picamoixons (García Diez *et al.* 1997: fig. 1) do not only end in short, repeated lines, but the stripe on the left has a semi-circular line with the same appendices added to it. A very similar figure has recently been documented on a pebble from the site of Esplugón in Huesca. The collection of pebbles and engravings on the wall of the rock-shelter is still being studied, from the level before the early Neolithic (Utrilla-Miranda *et al.* 2016; Obón Zúñiga *et al.* 2019). If we add this group of "macroschematic" forms to those already known at Dalmeri, the hypothesis that the contents of macroschematic art possess deep Palaeolithic roots in southern Europe becomes quite convincing (Bueno Ramírez & Balbín Behrmann 2016: 476) (Fig. 14). In fact, recent excavations at the site have documented Palaeolithic remains (Miret Estruch *et al.* 2016).

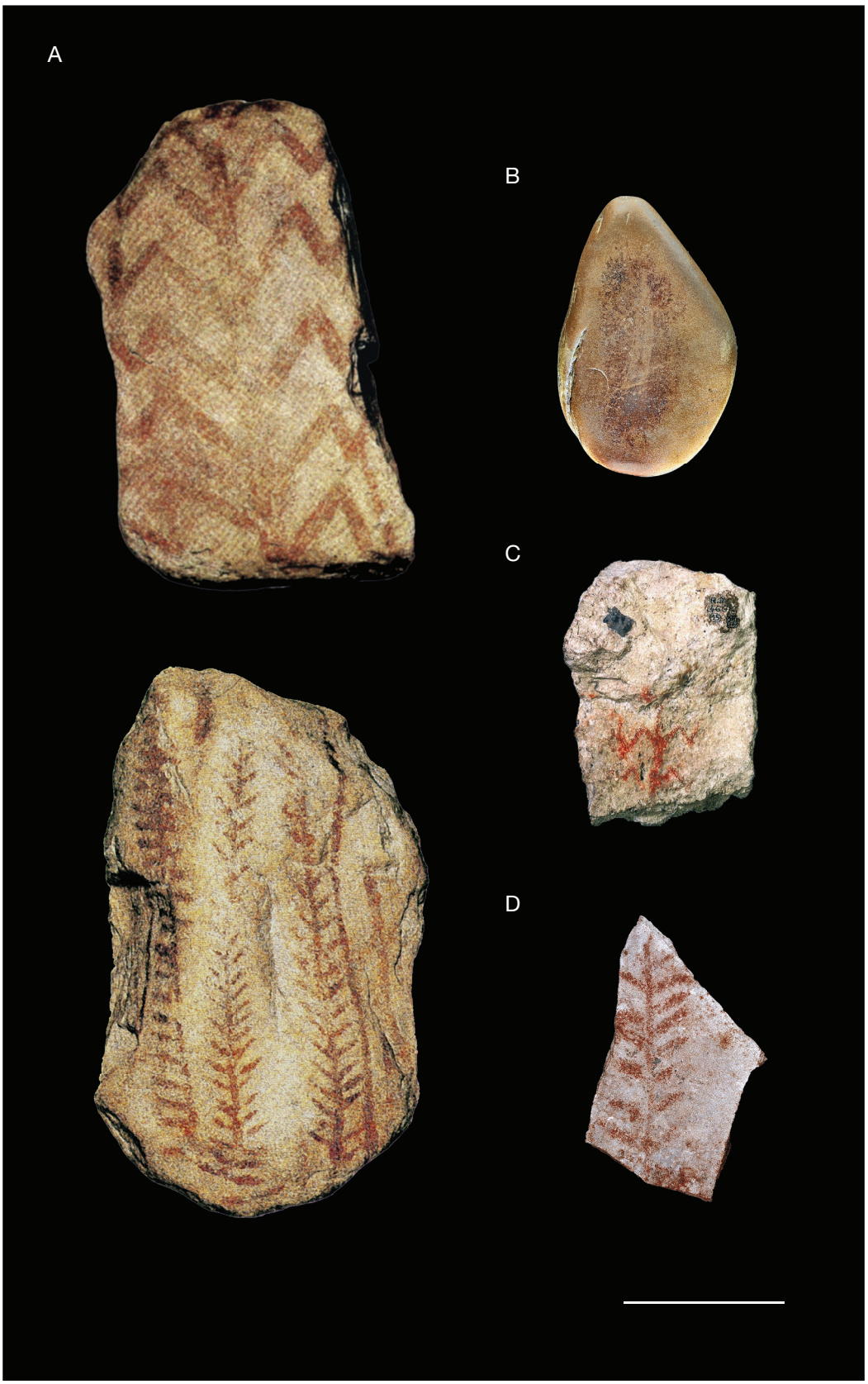

Fig. 12. — Different pieces with anthropomorphs with branch-shaped arms and tree motifs: **A**, painted stones from Riparo Villabruna funerary context, Italy, by Broglio 1992; **B**, painted pebble from Fariseu (Côa, Portugal) with branch-shaped arms; **C**, painted plaque with branch-shape arms (RD plaque) from Dalmeri (Italy) according to Dalmeri *et al.* 2011; **D**, painted plaque of El Parpalló cave (Valencia, Spain), according to Villaverde Bonilla 1994. Scale bar: 10 cm. Photo: B, R. de Balbín Behrmann.

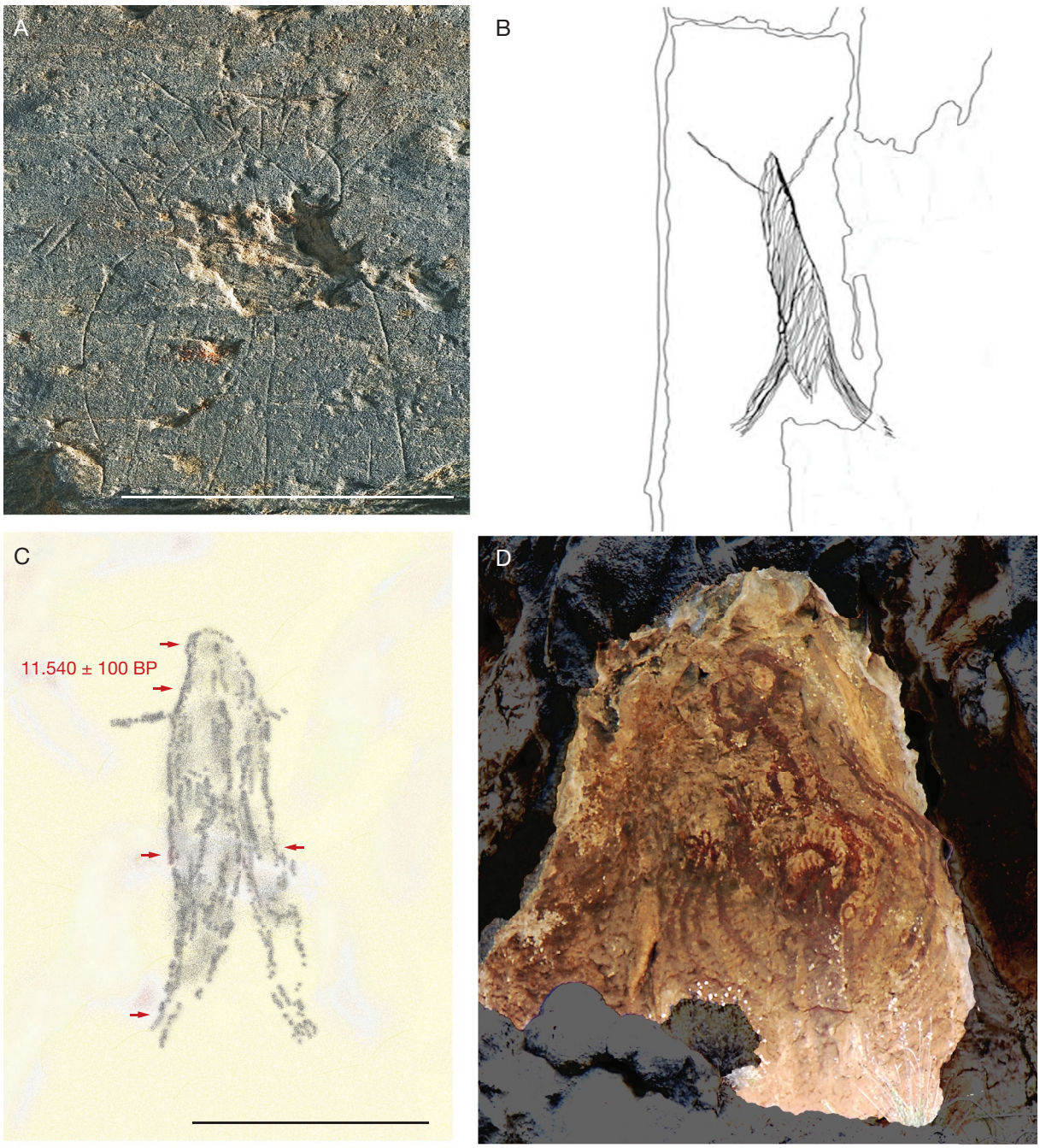

Fig. 13. — **A**, Engraved pebble with an anthropomorph that has straight lines rising from the head, Fariseu (Côa, Portugal) according to Santos *et al.* 2018; **B**, Vale Escuro engraved panel with an anthropomorph that has open arms (Côa, Portugal), according to Santos *et al.* 2018; **C**, painted human image with open arms and its ^{14}C dates, Cueva Palomera (Burgos, Spain) drawing by Bueno Ramírez *et al.* 2007a; **D**, painted human image with right line on the head, double sinuous lines and open arms, Plá de Petracos rock-shelter (Alicante) according to Hernández Perez *et al.* 1988. Scale bars: A, 3 cm; C, 50 cm.

PALAEOLITHIC-NEOLITHIC TRANSITIONS AND TRADITIONS IN SOUTHERN EUROPE THROUGH IBERIAN DATED CASES

The variety of contemporary graphic forms that we can begin to differentiate in the Iberian record requires a study of greater depth. It seems that the classic Palaeolithic canons were maintained for a longer period in parietal art in northern Spain, perhaps as a form of resilience by hunter groups in that area, as it is also visible at some mortuary sites (Bueno Ramírez *et al.* 2018). However, this view might be attributable to the fact that more direct dates are available for parietal art in northern Spain than in other parts of Iberia.

The few dates that have been obtained from the paintings of the Iberian Mediterranean area clearly confirm that the representations studied there were initially produced long before the Neolithic. The date C14, 9th millenium BP, for the level that covers the Levantine figures described by Pericot

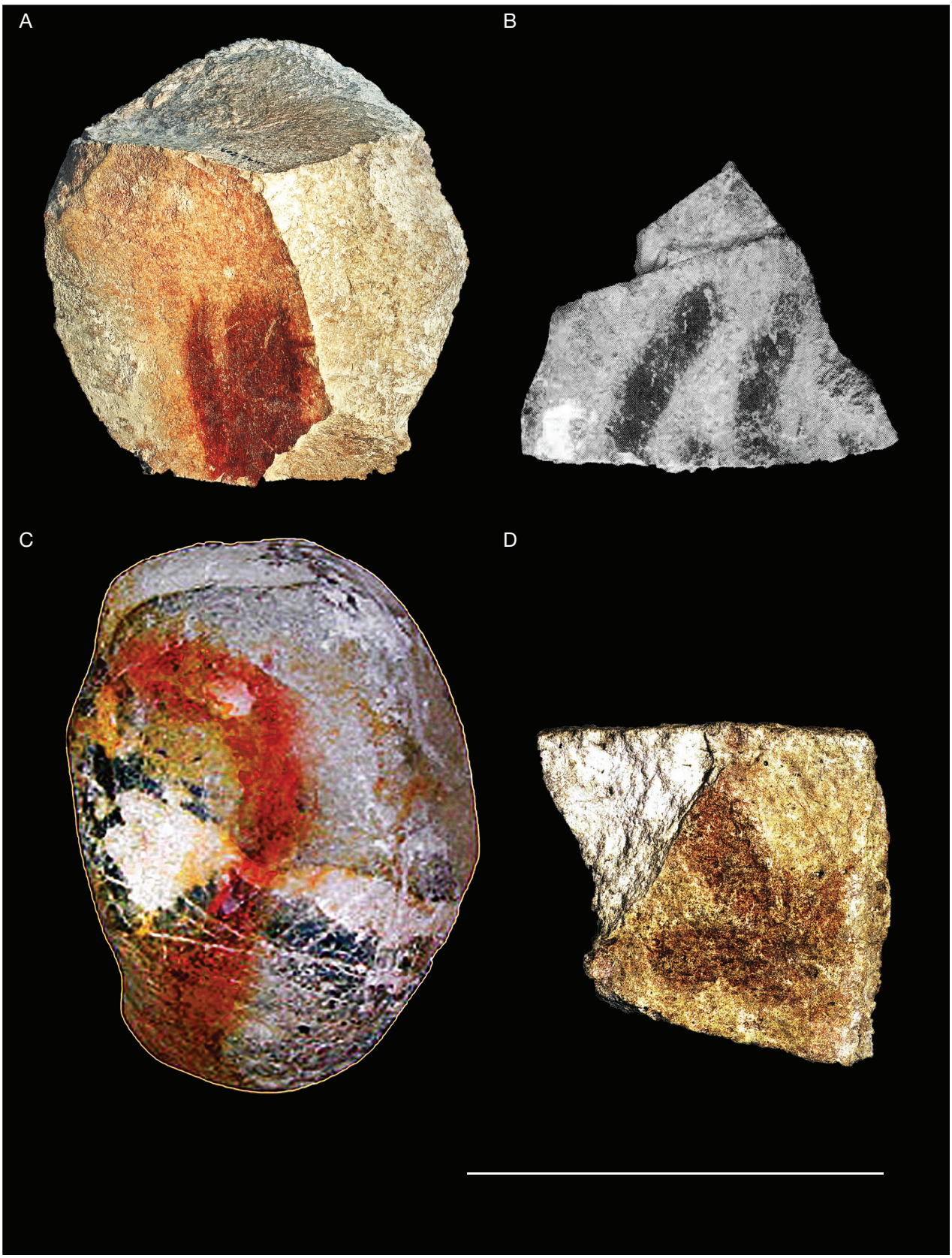

Fig. 14. — **A**, Painted pebble from Chaves (Huesca, Spain) associated to an ancient Neolithic level, according Utrilla *et al.* 2008; **B**, Picamoixons painted plaque (Tarragona, Spain) (11050 ± 90 BP to 9170 ± 80 BP), according to García Diez *et al.*1997; **C**, painted pebble of l'Esplugón rock-shelter (Huesca, Spain) according to Utrilla-Miranda *et al.* 2016; **D**, anthropomorph painted plaque no. RD 211 s. 1 q. 46F/h, US 65, from Riparo Dalmeri, according to Dalmeri *et al.* 2011: 87. Scale bar: 5 cm. Photos: A, R. de Balbín Behrmann.

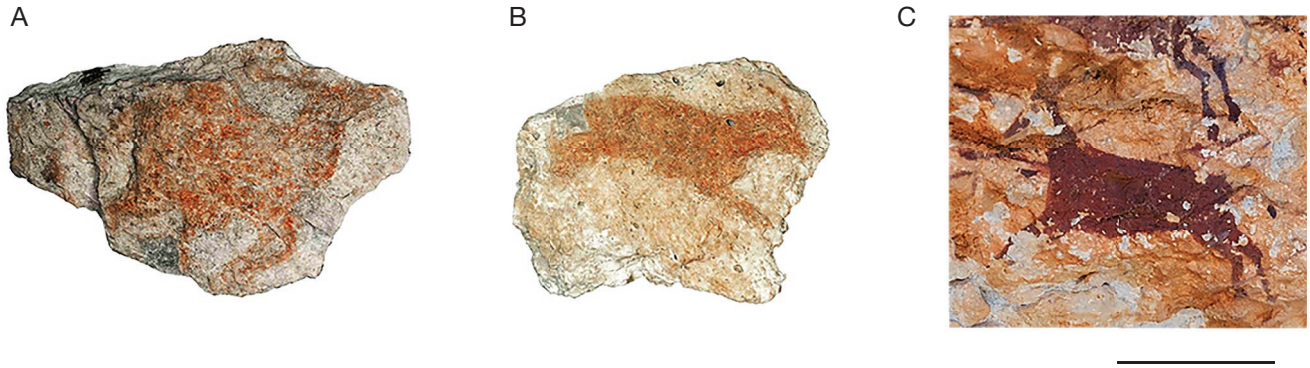

Fig. 15. — **A**, Painting portable art of a goat and a red deer in motion (**B**) from Dalmeri U26, according Dalmeri *et al.* 2011; **C**, parietal art: a goat in motion from Ermites I rock shelter, according Viñas *et al.* 2016. Scale bar: 10 cm.

in Cueva de la Cocina, Valencia (García Puchol *et al.* 2018: 265), may be added to what was obtained from the crust associated with a goat in motion in Ermites I rock-shelter, Tarragona, in the 10th millenium BP (Viñas-Vallverdú *et al.* 2016) (Fig. 15). The preceding dates of the crust on the rock-shelter of Henarejos, Cuenca, and the archaeological context of the rock-shelter of l'Esplugón in Huesca, ensure that in the 7th millennium BP, these naturalistic representations in progress continue to have effect (Ruiz López *et al.* 2006; Utrilla-Miranda *et al.* 2016). Keeping in mind the chronologies between the 13th and 12th BP of the levels of Dalmeri, that contain painted representations in motion, a period between the 13th and the 8th BP for Levantine art is acceptable. The long relationship between some of its forms and those detected on the surfaces of Coa, as well as its portable plaques and pebbles references, allows us to frame the 12th millennium as a moment of notable significance, in which human figures with full lines are associated with animals that maintain natural canons and others of rapid execution and long or oval bodies. The panel of Barranco Hondo is a great example, namely because the excavations in the nearby Abrigo del Angel 1 and 2 in Huesca convey material contexts dated between the 10th and 8th millennium BP (Utrilla-Miranda *et al.* 2009b: 186-187) (Fig. 16).

In this same period, naturalistic depictions and small Style V figures appear at sites all over the Iberian Peninsula, especially in the west and the east, according to current knowledge. However, it is likely that more sites exist in the interior, as can be deduced from sites like Estebanvela in Segovia. The dates for levels containing pebbles and plaques with these motifs, like those for calcite and C14 over paintings, are proving to be increasingly compact, between the 13th and 8th millennia BP, with fully comparable diachronicity in both sectors and also with other decorated sites in southern Europe (Corchón *et al.* 1996; García Diez *et al.* 1997; Utrilla-Miranda & Villaverde 2004; García-Arguelles *et al.* 2005; Ruiz López *et al.* 2006; Martinez Moreno *et al.* 2011; Cacho *et al.* 2012; Langlais *et al.* 2010; Figueiredo *et al.* 2020; Utrilla-Miranda *et al.* 2016; Viñas-Vallverdú *et al.* 2016; Naudinot *et al.* 2017; García-Puchol *et al.* 2018; Santos *et al.* 2018; Ortega-Martínez *et al.* 2020). If we consider graphic sets with these chronologies that have also been documented in northern Spain, we see a wide range of engraved and painted images on rock or portable pebbles and plaques, probably at the same time as other images on wood or clay that have not survived time.

The Côa mobile art confirms that more naturalistic figures appear side-by-side with versions of classic schematic art or what has been termed macroschematic art, which would be part of the same graphic set. Information about this has suddenly grown, establishing it as a cultural product rooted in Upper Palaeolithic art (Fig. 17) (Bueno Ramírez & Balbín Behrmann 2009b: 87; 2016).

In northern Europe, continuous sequences can be followed easily, including some naturalist content painted in the 10-9th millennium (Schulz-Paulsson *et al.* 2019), as well as geometric forms similar to Azilian pebbles. Similarly, varied human figures with Palaeolithic references are still relevant, forming uniform identity records until 7th millennium BP (Veil *et al.* 2012; Verhart 2015; Jungklaus *et al.* 2016; Plonka 2019).

In the same way, some of the elaborate geometric decorations on plaques correlate to decoration on early Neolithic pottery, as occurs on the plains of central Europe (Mateiciucovä 2004; Bueno Ramírez & Balbín Behrmann 2016: 474). The dates for the oldest recorded ceramics in northern Europe are between the 13th and 8th cal BP (Shoda *et al.* 2020), confirms this hypothesis.

The role of the triangles from the Magdalenian can be followed through the Neolithic. They also appear on the decorated pebble from the Neolithic site of Casa Montero (8th millennium BP). This is another example of long duration that includes the first Neolithic female expressions (Bueno Ramírez 2021).

There are also many references to snake shapped motifs in the late Palaeolithic, not just on the eastern coast, but in the southern peninsula. These dilute the geographic borders that attributed these versions to macroschematic art (Martinez García 2013; Balbín Behrmann *et al.* 2017). Sinuous lines with sharp endings appear on the Neolithic pebbles of Chaves, reclaiming a tradition that is also visible in the ones from Dalmeri (Italy) and in some examples of the Piette Mas d'Azil collection or the Picamoixons plaque (Chollot 1964; García Diez *et al.* 1997).

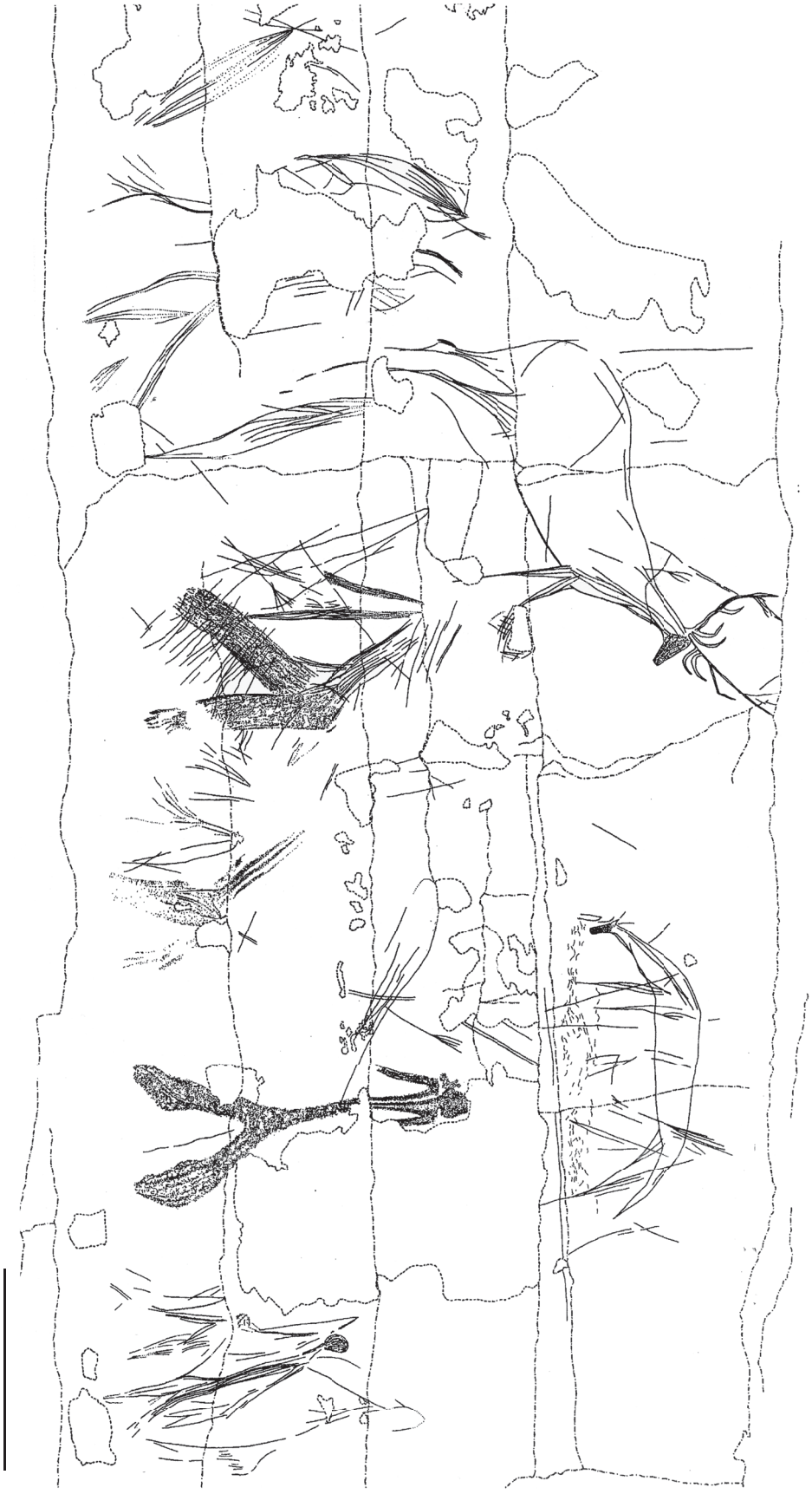

Fig. 16. — Barranco Hondo rock-shelter drawing by Utrilla & Villaverde 2004. Scale bar: 1 m.

Fig. 17. —Style V zoomorphic and signs motifs from Duero river area, Spain, according Bueno Ramírez *et al.* 2007a. The chronologies included transcribe literally those published to Fariseu, Cueva Palomera and Estebanvela (Cacho Quesada & Ripoll López 1987; Corchón *et al.* 1996; Aubry *et al.* 2010).

Anthropomorphic imagery has doubtlessly been a point of reference for thematic differences between Palaeolithic and Post-palaeolithic art. Its presence is apparent in the paintings of Cueva Palomera, Burgos, in the surfaces from Coa and in many repertories of mobile artefacts throughout the rest of Europe (Coureaud 1985; D'Errico & Possenti 1999). It is also reflected in codified versions with an indisputable impact on schematic art. Its figurations on early Neolithic ceramic supports shortens the otherwise long period between the Paleolithic and Neolithic. It is the case of the branch-shaped images, the bow-armed motifs, the characters with long cloths, or those that wear rays on their head, a trait related to the Paleolithic motifs en *fil de fer*. None of these forms is the universal answer to a seemingly simple issue.

The following graphic shows the dated references. We have based it on various general chronological repertories (Langlais *et al.* 2014; Naudinot *et al.* 2014, 2017; Alday *et al.* 2018; Bergadá *et al.* 2018; Pardo-Gordó & Carvalho 2020; Ortega-Martínez *et al.* 2020), and we have taken into account the data from specific sites.

It is evident that the chronologies associated with these materials are not abundant, and that they are especially scarce in the 8th millennium. Many of these dates come from newly developed reports from the last ten years. Thus, this is a helpful piece of information for what is to come in the future. Collections like those of Chaves (296 items) or L'Esplugón are still being studied. Both sites present Mesolithic levels (Utrilla-Miranda *et al.* 2008, 2016). The hypothesis for early Neolithic portable art with decorated pebbles as the main artefact is suggested by evidence in Iberia, like Casa Montero in Madrid or La Araña in Andalucía. But the concentration of sites from the Pyrenees may be marking a key area from which to deduct the antiquity of the expansion of the most formalized contents of schematic art, which coincides with ancient chronologies for the Neolithic in that sector (Fig. 18).

Currently, the oldest dates for Iberian schematic art were obtained from anthropomorphs in Cueva Palomera and from pebbles at Côa, in the latest levels at the site of Fariseu. In the 12th millennium BP these images were being produced in places where schematic art was unknown before. It is occasionally associated with classic canons of Palaeolithic art, Style V and "macroschematic" style (Bueno Ramírez & Balbín Behrmann 2021a). The great expressiveness of some of these sets in southern Europe (i.e., some Italian sites) must have played a role comparable with that of some representations in western Iberia.

Fig. 18. — Decorated pebbles of Mas d'Azil (Piette Collection), according Chollot 1964. Scale bar: 10 cm.

FINAL REMARKS

Between the hunting-gathering way of life in the Upper Palaeolithic and the first farmers, a period of about six millennia or even more – depending on the region and the research (14-13-12th to 8th- 7th millennia BP) – population became sedentary, farming began as an essential means of production, etc. The impact of climate or geographic factors supposedly conditioned changes in symbolism and culture. Much of the 20th century Iberian historiography interpreted this transition as a circumstance with "disastrous" consequences, implying the migration of large mammals towards the north of Europe, along with populations that depended on hunting them. At that time, the persistent cold in the north of Europe maintained a stable or even growing population in which Upper Palaeolithic images still appeared on portable art forms and in open-air engravings.

This interpretation began to be reviewed toward the end of the 20th century. It was then acknowledged that the population increased thanks to a milder climate, the abundance of woodland animals and greater possibilities for gathering plants-derived produce. In this context, the Iberian Peninsula was regarded as an area of special interest because of its antecedent Palaeolithic population with abundant parietal and portable art, as well as its unique geographic location between the Atlantic Ocean and the Mediterranean Sea, and between Africa and Europe.

The idea of a growing Magdalenian population has become consolidated so that the Iberian Peninsula is seen as one of the most densely populated regions in southern Europe, not only in that period but in the era between the Azilian and the Mesolithic. The extent of this population still ought to be determined, as what we know is directly correlated with the areas where most recent studies have been carried out.

The confirmation of parietal art and portable art in the Azilian (or periods with a comparable cultural ascription) happening at the same time has definitively refuted the supposed drastic disappearance of Palaeolithic graphic formulae. These were reduced exclusively to portable objects of different kinds until finally vanishing from technical and thematic impoverishment. Data from Iberia shows the need for detailed studies of walls at sites with portable art dated on the Azilian period in other parts of southern Europe (Mussi *et al.* 2012; Sigari 2014; Mironti *et al.* 2019). This would probably increase the number of representative parietal groups.

The evidence briefly reviewed in this paper indicates that in accepted Iberian historiography, the separation between the western and eastern peninsula regarding graphic production during the transition from the Palaeolithic to the Neolithic was much more nuanced, and certainly requires a more detailed reflection (Fig. 19).

The characterisation of Style V supports the hypothesis that the cultural background of hunter groups survived in southern Europe. The importance and geographic extension of the described data undoubtedly demonstrates the vitality of those roots in other southern countries, especially France and Italy. The occupied sites (whatever their functionality may be) were decorated as part of a cultural dialectic and a way to transmit information to contemporary and future generations. Some DNA studies indicate genetic affinities between European hunter groups, while others reveal external contributions (Sanchez-Quinto *et al.* 2012; Price 2015; Olalde *et al.* 2014, 2019; Pimenta *et al.* 2019; Brunel *et al.* 2020; Marcus *et al.* 2020). However, the study of cultural items shows that the introduction of outside elements did not marginalise the maintenance of formal, technical and therefore, ideological codes. Schematic art is one of the graphic developments created by the last hunters in southern Europe.

Based on current knowledge, graphic images in both parts of Europe classically differentiated between Palaeolithic cave art and portable art, which cannot be separated any longer. A joint revision shows formal, technical and chronological concomitances that must be more precisely determined with

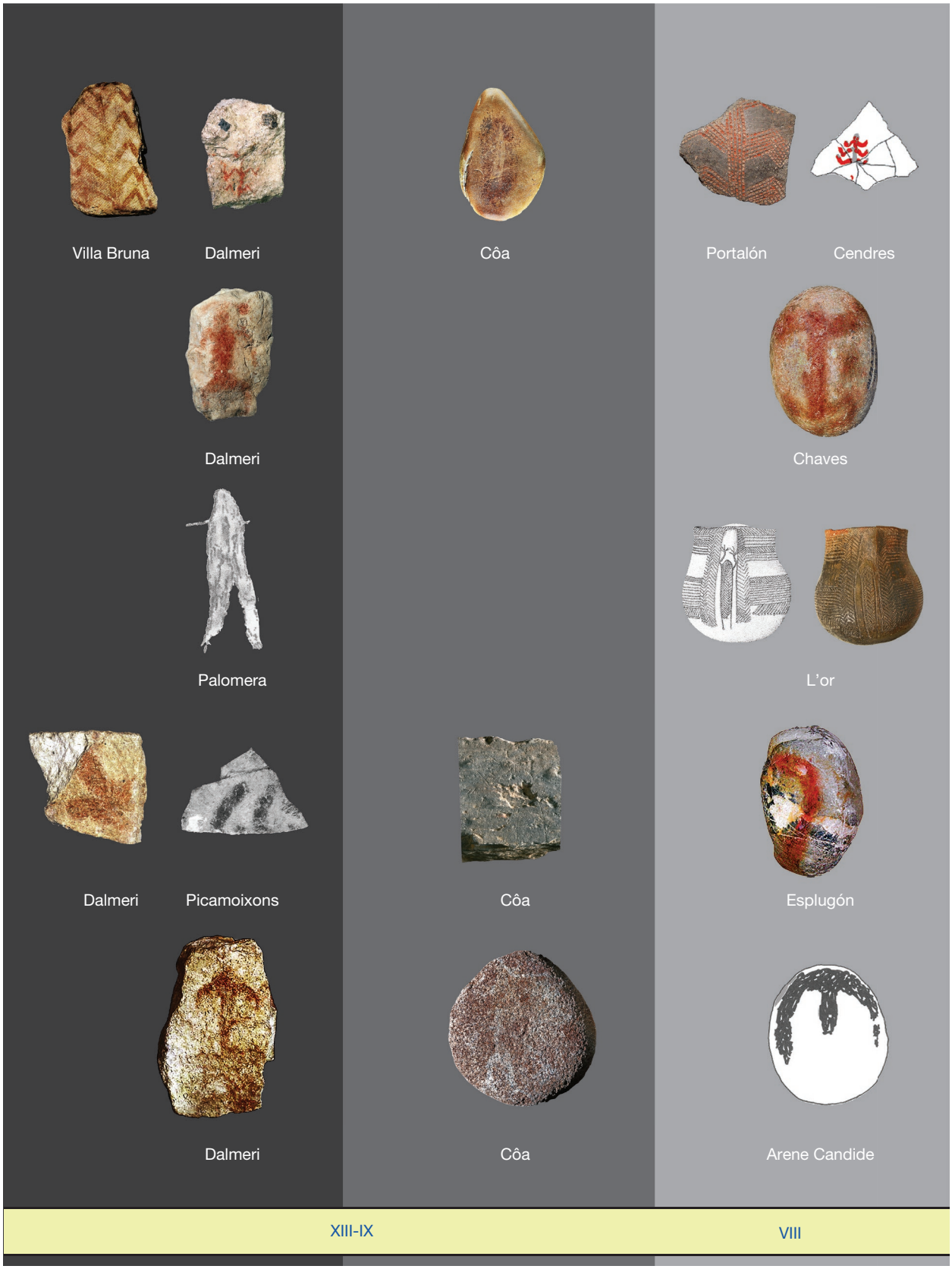

Fig. 19. — Dated 13th-8th millenium BP Schematic and Macroschematic human figures between Palaeolithic to Neolithic in southern Europe.

specific research. It basically demonstrated the symbolic and cultural proximity between both "worlds", as well as the continuity of graphic tools or "languages".

Comparing the above-mentioned data for northern Europe will clarify future lines of investigation. It is obvious that some of the themes and techniques inherited from the late Paleolithic constitute the graphic background of the Epipalaeolithic, Mesolithic and Neolithic motifs throughout Europe. This fact does not negate other influences, but it does justify the importance of its persistence as part of the symbolic construction of the first farmers. Another noteworthy aspect is the definition of territories with a long tradition of use, in which graphic markers accumulate at gathering places throughout millennia (Bueno Ramírez 2009; Selsing 2020).

The changes to our knowledge of prehistoric archaeology in Iberia can be extended to the rest of the European Atlantic seaboard (Bahn & Pettit 2009; Naudinot *et al.* 2017; Schultz-Paulson *et al.* 2019). Iberia is an excellent case study to emphasise that geographic marginality should be replaced by fieldwork and high-quality documentation, which are able to establish presences or absences that have never before been demonstrated archaeologically. At the same time, the latest interpretations of graphic productions in Europe are cause for another series of reflections, especially in regard to the importance of large human representations in wood or stone, like in northern Europe. Their chronological depth probably goes beyond the limits of raising the menhirs and stelae associated with Megalithism (Bueno Ramírez & Balbín Behrmann 2021b). This is an aspect in which the Iberian Peninsula remains a well of knowledge open for further research.

Cultural nominalism created noise and avoided the assessment of this period throughout the entire European continent. Symbols are a better reflection than any other material element of family and group identities. If symbols are regarded as material vehicles of identity, learning and connectivity, the study of styles is useful to understand the transformation processes and resilience. These played a role amongst the last hunter-gatherer societies in periods of demographic growth or change. Symbols did not vanish radically, but left their technical and thematic footprint, and probably their meanings, in the graphic expressions of the first farmers. These include parietal decoration in caves and rock-shelters, and on rock surfaces at open-air sites, as well as portable art. We are now able to thoroughly date periods of time between the Upper Palaeolithic and the Neolithic, and thus define the long timespan in which the subjects and techniques remained in effect. Our system of organising past cultures must consider graphic realities in a more transversal way.

Changes and challenges to classic interpretation of late Upper Palaeolithic art has drastically altered the discipline in recent years. However, it is still being revised. From a static view of abandoned caves to a dynamic appreciation of symbols as part of the material evidence of their creators, multiple lines of research have been revealed. The different nuances that we can expect from detailed interpretations of the graphic sequences, their relationship with sites in neighbouring territories, the details of graphic formulae and their survival in time, their level of connectivity, and the demography at that time, will reveal new possibilities to approach communication systems and social networks of hunter groups throughout Europe and its most direct heirs. Yet none of these reflections should ignore a wider reality. All human groups known to date used, as the most basic communication tool, symbols that identified specific sites where they carried out their lives, from at least the Upper Palaeolithic and beyond.

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