

## THE DEVELOPED HELMETS OF THE CHRISTIAN KINGDOMS OF THE IBERIAN PENINSULA OF 1150–1230 AD: INDICATIONS OF UNIQUE REGIONAL STYLES

EL DESARROLLO DE CASCOS EN LOS REINOS CRISTIANOS DE LA PENÍNSULA IBÉRICA  
ENTRE 1150 Y 1230 D.C.: EVIDENCIAS DE UN ÚNICO ESTILO REGIONAL

POR

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### ABSTRACT – RESUMEN

The knightly helmets used in the Christian kingdoms of the Iberian Peninsula in the 12<sup>th</sup> and early 13<sup>th</sup> centuries presented a range of designs that reflect both the local military fashion trends and the cultural influences from France in the northeast and Muslim-held regions in the south. Despite the near-complete absence of an archaeological record for helmets, these designs are amply represented in visual arts. This study analyses 56 artworks depicting helmets with developed facial protection executed within the historical territories of Aragon, Navarra, Castile and Leon. The proposed typology outlines three possibly endemic Iberian helmet types, as well as three further types common in the art of other European regions. The temporal and geographical distributions of sources are discussed. It is concluded that the earliest depictions of both the masked and enclosed helmets in Europe are found in Navarre, although generally, the Iberian depictions of helmets with developed facial protection are contemporary with those in the rest of Europe.

Los cascos de caballería utilizados en los reinos cristianos de la península ibérica en el siglo XII y principios del XIII presentaban una variedad de diseños que reflejan tanto las tendencias de la moda militar local como las influencias culturales de Francia en el noreste y las regiones controladas por musulmanes en el sur. A pesar de la ausencia casi total de registros arqueológicos, estos diseños están ampliamente representados en las artes visuales. Este estudio analiza 56 obras de arte que representan cascos con protección facial usados en los territorios históricos de Aragón, Navarra, Castilla y León. Una tipología propuesta describe tres tipos de casco endémicos ibéricos, así como tres tipos comunes en el arte de otras regiones europeas. Se discuten las distribuciones temporales y geográficas de las fuentes. Se concluye que las primeras representaciones de cascos con facial y completamente cerrados en Europa se encuentran en Navarra y que, en general, las representaciones ibéricas de cascos con protección facial desarrollada son anteriores a las del resto de Europa.

### KEYWORDS – PALABRAS CLAVE

Helmets; High Middle Ages; 12<sup>th</sup> century; Spain; Iberian Peninsula; armour; typology.

Cascos; Alta Edad Media; siglo XII; España, península ibérica; armadura; tipología.

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## INTRODUCTION

The visual depictions in Hispanic art during the latter part of the 12th century and the early 13th century provides us with genuinely captivating glimpses into the field of medieval weaponry. Strikingly, there is a noticeable absence of scholarly exploration of one of the most noteworthy typological examples thus far. At its core are diverse varieties of enclosed headgear, of which contemporaneous discoveries in other regions of Europe are proven elusive. Within our categorization, we focus on the particular type of helmet integrating a facial protection element that shields the entire face, leaving only openings for the eyes. Additionally, there exist depictions of complete helmets as a single piece, incorporating both a facial element and protective features at the nape. The forging of the facial protection and skull as a single piece constitutes an innovation possibly originating from the Iberian peninsula. Such helmets have traditionally been interpreted as an isolated rarity (Bruhn de Hoffmeyer, 1982: 144-150), but in this study we demonstrate their wide diffusion in the Romanesque art of the Iberian Peninsula.

Some examples from the Arabic sphere and Eastern Europe seem to share similarities with the Iberian models, although it is accidental resemblance rather than a product of exchange. Some remote parallels with archaeological finds in Eastern countries can be observed, but they still deviate from the distinctive morphology of the Hispanic helmets (Español-Solana, 2023: 113-116). Could their influences be traced back to Maghrebi or Hispano-Muslim models of the period? *The Kitāb suwar al-kawākib al-tābita*, preserved in the Vatican Apostolic Library (Mss Ross 1033), composed in 1224 in Ceuta, depicts two warriors wearing conical helmets with reinforcements extending beyond the crown, protecting the nape and temporal region, similar to the analyzed types. However, they were represented using

joined plates, distinguishing them from some of the types we will examine in this study.

The process of development of knightly helmets in Europe was characterized by incorporation of extra protective elements in the nasal area followed by the shaping of three-quarter and complete masks or visors firmly attached to the skull. However, the uniqueness on the Iberian Peninsula lies in the representation of helmets as a single piece in many cases, and the evolution in terms of protection does not exclusively originate from the nasal part. Recent published studies link these models to a point of origin in the Near East, which would have disseminated helmet types with protective masks to Europe and Byzantium in the west, as well as to China in the east. This phenomenon is based on the analysis of helmets attributed to the Yurchen culture, on the border between Russia and China (Кулешов, Артемьева, 2022). It is undeniable that protective masks on helmets have been a reality since the mid-12th century in all these territories, many of them designed to emulate facial features, highlighting the eyebrows above the visor and the shape of the mouth. Some Spanish artistic representations related to this model, especially those attributed to Islamic knights, share similarities, such as round eye holes and other elements, with anthropomorphic masks found in the Byzantine palace of Stam Bula, dated around 1143-1180 (Кулешов, Артемьева, 2022: 198). Many of these examples, which will be analyzed in this study, seem to suggest that the influences of these studied helmets could have reached the Christian realms from the south.

Therefore, in this article, we aim to put forward a typology of helmets in the Christian kingdoms of the northern Iberian Peninsula for the period between 1150 and 1230. This will be achieved through a comprehensive gathering, critical review, and analysis of the iconographic sources that depict these helmets, with the support of archaeological and documentary evidence. In addition to this primary objective, the study examines

the geographical and temporal distributions of the studied pictorial sources. Lastly, this work establishes connections between this model of Iberian helmets and other references developed around the same historical period in Western Europe.

### **MEDIEVAL ICONOGRAPHY AS A SOURCE FOR WARFARE IN THE MIDDLE AGES. FROM HEURISTICS TO CRITICISM**

Military historians of the medieval Hispanic period face adverse conditions, as will be discussed in this section. The scarcity of military archaeological remains in publicly owned institutions, which would guarantee their origin and enable a systematic study, coupled with a lack of tradition in the study and museumization of war-related spaces, makes their task challenging. Consequently, a significant portion of studies on weaponry has relied heavily on iconographic sources, which, obviously, raises some issues when considered as a primary source of complete reliability.

Regarding the registration, study, and interpretation of Peninsular helmets in the High Middle Ages, the historian encounters, in the first instance, certain contradictions between the pictorial and written sources. While Islamic chronicles provide textual details about some of these helmets and their attributes, Christian documentary sources and chronicles are relatively silent on this matter, mentioning them only without specifications. In contrast, Christian iconography is abundant in displaying various types and variations, a phenomenon not reflected in the few images of Islamic art in the Iberian Peninsula during the same period. One might argue that developing a typology of Hispanic helmets based solely on Christian sources would be confined to the warlike reality of knights and foot soldiers of this religion, but this perspective is far from accurate. A considerable amount of iconography from Christian realms intricately depicts Hispano-Muslim warriors, where the conflict between Islam and Christianity plays a crucial role. It is essential not to detach from the idea that Romanesque sculpture or illuminations in codices and documents represent symbols, not photographic realities. These and other ideological issues have been well addressed by historiography (Monteira, 2012 and 2013; Baschet, 2018: 18).

In our study of iconography aiming to establish reliable parameters for the interpretation of

medieval weaponry, we consider a series of issues that are fundamental and inherent to the historian's profession in critiquing any historical source. Three fundamental heuristic problems underlie the study of iconography: the problem of reality, the problem of imagination, and the problem of territoriality (Español, 2019: 349-354). The problem of reality implies that Romanesque sculptors conveyed a symbolic message in stone. They were not interested in creating images entirely faithful to reality, as the goal of this iconography was to convey messages, not to portray realities. This problem must be taken into consideration when analyzing details about historical costumes, gestures, or various technologies, since we may consider the solutions that the author executed for convenience or aesthetics as accurate depictions of reality.

The problem of imagination relates to the knowledge these artists had about what they were representing. We are not referring to the biblical passages that dominate most of Romanesque imagery but to what they knew about knights, clothing, weapons, or helmets. It is evident that they did not have models in front of them reproducing the actions they were sculpting. In other words, they executed their art by heart. They had previously seen the technology they were going to reproduce. This leads to two problems. The first is that it is possible that the artists sculpted images they had not seen before, only their descriptions. Many of these artists, especially illuminators, were part of monastic communities and may not have seen a real cavalry charge before. The second problem is that this way of organizing work made it difficult to specify technological details of elements they did not have in front of them or that they had seen a long time ago.

Lastly, the problem of territoriality affects those who carved Romanesque art to a lesser extent and is more relevant to manuscript illuminators. It is because the author or authors of some iconographic sources carried out their work in workshops geographically distant from where they are currently attributed. It is challenging to think that capitals, corbels, or metopes could have been made in other regions to be sent hundreds of kilometers away, but this does affect illuminated manuscripts. There were workshops producing illuminations for institutions that then traveled to other places in Europe. The technology, trends, and material culture represented there were showing the practices of the workshops' place of origin, the mental reality of their illuminators, not the re-

gion that commissioned the manuscript, whose miniatures would not be stylistically indigenous.

However, there is also a consideration that may in turn affect our analysis in a positive way. We note that the helmet is a very prominent element of a soldier's appearance, as it is adjacent to the face and protects the head. As the structural and decorative qualities of real helmets were of high import to their wearers, they were likely also the focus of the artists who depicted them. There are grounds to believe that of all the military gear, it is the depictions of helmets were some of the most realistic.

These and other problems are fundamental when studying war technology based on sources belonging to an iconographic record.

#### REVIEW OF LITERATURE ON IBERIAN PENINSULA HELMETS WITH DEVELOPED FACIAL PROTECTION

Studies on Spanish weaponry from the Middle Ages are not very numerous. Apart from the extensive output of the *Gladius* journal and the publications of some authors with wide experience in armament research, such as Soler del Campo (1986a; 1986b; 1990; 1993a; 1993b; 2006; 2007; or 2009), de Riquer (1968; 1969 and 1990), David Nicolle (1976; 1999; 2002a or 2002b), or Bruhn de Hoffmeyer (1961; 1966; and, primarily, 1972 and 1982) there is no broad tradition on Spanish soil. It is also worth acknowledging the recent efforts of some associations contributing to the study of weaponry and war in general, from academic or perspectives of dissemination. This includes the Spanish Association of Military History and the Iberian Association of Military History, spanning the 4th to the 16th centuries, formed by researchers and academics from Spain and Portugal. This scientific association and La Ergástula publishing house have recently released a reference monograph on Spanish weaponry, directed by Alvira Cabrer (Alvira, 2021), which includes an adequate state of the art conducted by Soler del Campo (Soler, 2021).

The scarcity of studies is linked to the fact that medieval war archaeology, which should significantly inform the other works on weapons and armour, is still relatively underdeveloped in Spain. While this discipline has seen certain advances in the recent years, it's important to note that military museums are not very numerous, and battlefield museum projects, even though they have experienced a resurgence in the recent years, are still lim-

ited. Additionally, many military artifacts remain in private collections, and the rest are safeguarded by museums, archaeological parks, or visitor centers at monuments. Nevertheless, a significant portion of the pieces necessary for studying typologies and more specific elements are too small or constitute parts of weapons, which hold academic interest but may not be as suitable for exhibition.

The previous literature rarely acknowledged the very fact of existence of the endemic Iberian forms of masked and closed helmets, but did so based on only a small set of artistic sources, which limited the capacity to interpret the helmet evolution and establish a relevant typology. Peirce (1993) mentions the early helmets with developed facial protection depictions in Santa Maria la Real in Sanguesa, the Triumphant Arch in Ripoll, San Vicente Martyr in Frias, and the Cardeña Beatus, noting that they all originate from the northeast of the Iberian Peninsula, which is therefore a likely origin of the enclosed helmet technology. The seminal compilation of the pictorial and archaeological sources by Nicolle (1999) includes the carvings in Santa Maria la Real in Sanguesa, Santa Maria in Aguilar de Campoo, San Vicente Martyr in Frias, Cardeña Beatus, Avila Bible, Arroyo Beatus, but does not identify the visors in Ripoll (presumably due to his use of lower-quality photographs). Finally, Bruhn de Hoffmeyer (1972) gives a very brief review of 12th century Iberian armour, focusing once again on the Arroyo Beatus, and considers the face-guard therein an Oriental invention due to Mozarabic style of the manuscript.

Other authors also mention the use of this type of helmets, such as Cirlot Valenzuela, who briefly discusses it, arguing for its difference from the early great helm (they use the term *topfhelm*) (Cirlot, 1980: 249)<sup>1</sup>. Similarly, the doctoral thesis by Español-Solana lists several iconographic sources depicting the models studied thoroughly in this work, describing the morphology of various subtypes, depending on whether the facial component is shown separately or as a single piece (Español, 2021: 740-747). This thesis represents, in any case, the closest work regarding the consideration of these types of Iberian helmets and their depiction in iconography. However, its analysis takes a general approach within a larger study covering two centuries. Vondra has also studied the helmets of the Catalan territory for the 13th century (2015:

<sup>1</sup> Other authors call it a "barrel helmet" (Soler, 1993a).

53-63), fundamentally based on the chancellery seals and mortuary effigies. In fact, she identifies only one with a facial, of the typology studied in this work, on a seal from 1204 (Vondra, 2015: 58). Soler del Campo, in his seminal study of Spanish weaponry (1993a), confines himself to categorizing helmets with facial components as part of a whole, aggregating all the varieties under the Iberian early great helm type. Many of these authors, though, based their conclusions on limited iconographic databases, making it very challenging to systematize all the representations depicted in Christian art up to this point.

As one can see, the previous studies contain only limited evidence of masked, enclosed and closed helmets in 12th and early 13th century Christian Kingdoms of the Iberian Peninsula. It would be therefore of utmost interest to collect a maximally large database of primary sources and analyze them under a unified research framework, so that to gain a more holistic view of knightly helmet evolution and diversity in the region. In the view of the above considerations, this study sets the following aims: 1) compile the depictions of helmets with developed facial protection in the Christian art of AD 1150–1230 executed on the Iberian Peninsula; 2) identify the major types of helmet construction; 3) analyze the geographical distribution of pictorial sources; and 4) draw comparisons with the contemporary helmets used in the other states of Western Europe.

### A SYNTHESIS OF THE EVOLUTION OF HISPANIC HELMETS FROM THE END OF THE 11TH CENTURY TO THE FIRST DECADES OF THE 13TH CENTURY

The introduction of feudal cavalry as an essential component on the battlefields from the central decades of the 11th century exerted a significant influence on the evolution of weaponry in the Iberian Peninsula. It is likely that a substantial number of helmets depicted during the latter decades of the 11th century were of the *spangenhelm* type, a Germanic term referring to the riveted metal strips that shaped the helmet's structure. These strips connected three to six steel plates to form the helmet. High medieval models featured cheek plates made of metal or leather, which had already disappeared by ca. 1150. On the other hand, some were constructed without these plates, leaving the skull made up of a single piece. A type of helmet

from the Mozarabic tradition, but with notable European influence since the Visigothic period (Soler, 1986b; Soler, 1999). However, due to the lack of details and our caution in interpreting the iconography, we cannot assert these morphological details with certainty, although there are indications pointing in that direction.

We know from chronicle sources that in the Iberian Peninsula, some ceremonial helmets were decorated from at least the 10th century<sup>2</sup>. This tradition appears to have been reflected in the functional pieces worn by leaders or members of warrior elites in the Andalusian tradition. In the battle between Galib and Almanzor at the end of that century, for example, Galib wore a “tall golden helmet,” adorned with a red band<sup>3</sup>. ‘Abd al-Malik, Almanzor’s son left Cordoba in 1003 for the military expedition of that year “wearing on his head a helmet of iron, in an octagonal [prism] shape, golden and intensely shiny.”<sup>4</sup> It is most likely that this was a tall and conical skullcap helmet, segmented into eight faces, perhaps equipped with a nasal guard. The Cid’s helmet also had similar elements, described as a *spangenhelm* type, adorned with silver and gold<sup>5</sup>. Towards the end of the 11th century and during the 12th century, we have reports from the Christian context again, indicating that these helmets were often painted and decorated<sup>6</sup>.

The influences on the military culture of both forms of warfare were constant. Andalusians and Christians shared a material culture of war much more related and similar than what traditionally believed. In fact, as archival documentation and Muslim chronicles show, in border areas these similarities were much more pronounced<sup>7</sup>. Feudal and Andalusian people used the same weapons and types of armor, something that is especially evident during the 11th century. Even the armies of the Taifa kingdoms developed forms of heavy

<sup>2</sup> AL-RAZI, ISA IBN AHMAD; IBN HAYYAN: *Al-Muqtabis fi tarij al-Andalus* [26]:69-70.

<sup>3</sup> IBN HAZM, ABU MUHAMMAD ‘ALI IBN AHMAD IBN SA‘ID: *Naqt al-Arus*, 43.

<sup>4</sup> IBN IDARI AL-MARRAKUSI: *Kitāb al-bayān al-muğrib fi ājbār mulūk al-āndalus wa-l-mağrib*, 13.

<sup>5</sup> *Carmen Campidoctoris*, [XXX].

<sup>6</sup> *Liber Maiolichinus di gestis Pisanorum Illustribus*, (I)10.

<sup>7</sup> AL-RAZI, ISA IBN AHMAD; IBN HAYYAN: *Al-Muqtabis fi tarij al-Andalus*, VII; IBN HAYYAN, ABU MARWĀN HAYYĀN IBN JĀLĀF IBN HUSĀIN IBN HAYYĀN AL-QURTUBI: *Al-Muqtabis fi tarij al-Andalus*, V; IBN IDARI AL-MARRAKUSI: *Kitāb al-bayān al-muğrib fi ājbār mulūk al-āndalus wa-l-mağrib*; ABD AL-WĀHĪD AL-MARRĀKUSI, ABU MUHAMMAD: *Kitāb al-Mityib fi taljis ajbar al-Magrib*; ABD ALLĀH IBN BULUQQĪN: *Kitāb al-Tiby*; *Al-Hulal al-mawsiyya*.

cavalry combat, mimicking their Christian enemies (Español, 2021: 530).

This military symbiosis was cut short after 1100. The irruption of the Almoravids in the Peninsula implied a “Maghrebization” of Al-Andalus since the Hispanics were inserted within the military gears of the North African empire. However, if in a certain sense the latter were enriched by the Almoravid ways of waging war, especially in the tactical and technological dimension, it is no less true that they depended at first on the strategic and logistical resources of the Hispano-Muslim to face feudal enemies.

On the other side of that border, in the Christian lands, similar processes were taking place. Until the beginning of the 12th century, their military culture was very similar to the Muslim one. During this period, for example, the Christian lords of the eastern part of the peninsula launched a paradigmatic offensive strategy, consisting in the construction of approach castles in enemy territory, controlling their resources and distorting their economic and military development. But this very genuine way of waging war, that of building fortifications with strictly offensive purposes, was an exogenous model, imported from the Muslim enemy of the previous period (García Fitz, 2000; Español, 2021: 387-406). As a matter of fact, the army of the Caliphate of Córdoba had used this strategy as the main element of the campaign. Therefore, we are talking about two societies that strongly influenced each other in strategic, tactical and technological aspects<sup>8</sup>.

The Hispanic documentary sources from the late 11th and early 12th centuries designate helmets with a dual term: “*helmo/gelamus/gelmo*” for heavier models, primarily equipped with a nasal guard, which could also have a mail camail or some type of facial protection (towards the 12th century). On the other hand, they used “*çestinas/testangia/testinias*” for lighter elements, such as simpler helmets that protected the top of the head while leaving the nape, cheekpieces, face, and neck exposed. All these models could be semi-spherical, conical, corrugated, pointed, or cylindrical. They were equipped with a chin strap, fastened under the chin. We cannot determine the additional elements inside the helmet, but it

is likely that the interior was lined with fabric or soft material to fit and cushion the contact of the head with the metal or the rings of the mail hood, as the helmets lacking a mail aventail attached the edge of the helmet were placed over a mail coif.

All these head protection models will remain unchanged throughout the first decades of the 12th century. The mail aventails attached to the helmets, safeguarding the face, neck, and collarbones, will be replaced by coifs separate from the hauberk, causing the helmet and mail protection to become partitioned into separate pieces<sup>9</sup>. This transformation occurs in the Iberian Peninsula between 1100-1120 (Español, 202: 728-729; Español, 2023: 102-105). Towards the second half of the century, these evolving models undergo subtle changes with the incorporation of additional pieces to provide increased protection to areas of the head that, due to the biomechanics of contemporary armor, were often exposed in both infantry and cavalry combat.

There are archaeological examples that we can link to this protective evolution and, consequently, to the types and subtypes analyzed in this study. The William Scollard Collection (Los Angeles, USA) once housed a helmet with a semi-spherical skull and a facial component with separate openings for each eye, as well as side and rear protectors, documented as Hispanic and dated between 1175 and 1350. However, it has recently been sold and is no longer in the mentioned collection. From the available images and descriptions, we know that the metal thickness was not substantial, suggesting it might not be an authentic item. It consists of two pieces, one formed by the skull and the upper part of the eye holes, and another riveted to it, consisting of a perimeter protection around the entire circumference joining under the nasal. Another noteworthy model is the so-called helmet of Torres Novas, a helmet preserved and displayed in the municipal museum of this Portuguese town. It is dated between the 12th and 13th centuries and has a semi-spherical, slightly pointed original skull, to which two elements were later added: the nasal guard and perimeter protections that extend to the nape and lower temporal,

<sup>8</sup> IBN HAYYAN, ABU MARWÁN HAYYÁN IBN JÁLAF IBN HUSÁIN IBN HAYYÁN AL-QURTUBI: *Al-Muqtabis fi tarj al-Andalus*, V, [XVIII], [XXI] and [XXXII]; IBN IDARI AL-MARRAKUSI: *Kitāb al-bayān al-muğrib fi ājbār mulūk al-āndalus wa-l-mağrib*: 226; ABD ALLĀH IBN BULUQQĪN: *Kitāb al-Tiby*: VI [44].

<sup>9</sup> There are Arab sources, in any case, that already name these exempt pieces as gifts in caliphal embassies (IBN HAYYAN, ABU MARWÁN HAYYÁN IBN JÁLAF IBN HUSÁIN IBN HAYYÁN AL-QURTUBI: *Al-Muqtabis fi tarj al-Andalus*, [XXXIV]: 319), or for military action (IBN IDARI AL-MARRAKUSI: *Kitāb al-bayān al-muğrib fi ājbār mulūk al-āndalus wa-l-mağrib*, 13), although the term used by these authors may be designating another type of specific protection.

without a facial component (Barroca & Monteiro, 2000: 247-248; Martins 2014: 235; Sousa et al., 2020: 198). If we accept that these elements were added to the skull later, it would be an example of converting a simple helmet into one with greater protective assurances, likely influenced by the new Europe-wide trend of extending defenses over the face and head (Español, 2023: 115).

Hispanic iconography shows an identical example to the helmet of Torres Novas, worn by a Muslim figure. This is depicted — late 13th century— in the fresco in the church of San Juan Evangelista in Uncastillo (Zaragoza, Spain). The scene depicts Semitic soldiers arresting Saint James the Greater at the order of Herod Agrippa, providing clues that the painter was interested in portraying Muslims with this type of helmet. This may suggest that its typological origin should be traced back to the Andalusian or North African tradition, something that is corroborated by other foreign sources.

The 13th century, besides consolidating the helmet types with facial features as reviewed in this study, also reveals similar trends in Europe that are attributable to the Muslim tradition. This is exemplified in the French codex *Histoire d'Outremer*, written and illuminated between 1232 and 1261. One of its initial letters depicts a siege where the head of King Balac is shown in the hands of a warrior<sup>10</sup>. The depicted soldiers (Islamic and Crusaders alike) wear helmets identical to that of Torres Novas, featuring rear and side protections, with or without a nasal guard. One of them even displays a cone-shaped skull, akin to some Mongol codices from the 14th century (Español, 2023: 161).

Regarding the general evolution of other Peninsular helmets, in the second half of the 13th century, the semi-spherical model with nasal tends to disappear. From that point on, the helmets used by Christian armies primarily fall into three categories. The *cervellera* or semi-spherical helmet without a nasal is used by foot soldiers and cavalry alike, worn over a leather or padded hood in the first case and over the mail coif in the case of the latter. There are few archaeological remains of these Peninsula elements, except for one piece that belonged to the Museo-Armería Estruch in Barcelona, recorded and cataloged in the late 19th century, but whose current whereabouts are unknown (Museo-Armería de D. José Estruch y Cumella, 1896). Images show this *cervellera* with holes in the lower perimeter for attaching the mail or coif with straps or

leather. Sources suggest that heavy Spanish cavalry in the second half of the 13th century used the *cervellera* for skirmishing and the complete helmet or great helm for cavalry charges and close-quarters combat (Español, 2023: 164-169).

Also common during this period are the *capelina* and the *capiello de fierro/capelo de ferro/capel de ferre*, the first one with a narrower brim and the latter with a wider brim (Bruhn de Hoffmeyer, 1982: 146 and onwards). This is primarily a foot soldier's helmet. Its purpose was to protect the foot soldier from cavalry attacks, as the projecting brims covered the neck and shoulders in the case of blows from above. Lastly, the great helm or complete helmet covered the knight's head entirely. This helmet was constructed from several riveted pieces and had a flat top. Everything indicates that this full protection was external and did not evolve from the ocular-facial helmets studied in this work but was introduced to Spain from the third decade of the 13th century onwards (Español, 2023: 164-165). Beneath the tophelm or even the mail coif, the knight also occasionally used a small leather or metal bascinet as reinforcement (Bruhn de Hoffmeyer, 1982: 151).

## AVAILABLE ARTISTIC EVIDENCE

The foremost feature of the sources for helmets with developed facial protection originating from what is Spain today is the predominance of sculpture (Table 1). Indeed, of the 56 Iberian Peninsula sources reviewed in this study, 46 are represented by sculpture – column capitals, cornice decorations and church or palace portal figures. This sets the helmet sources of the said region apart from those in the rest of Europe, which are less represented in sculpture. Only five sources are found in Iberian manuscript illumination; note that these five miniatures represent mainly masked helmets - C3, C4, C14, and F3 which may also be of the masked type. The French-influenced flat-topped closed helmet G1 is also found in a manuscript miniature. Finally, the five remaining depictions are in equestrian seals demonstrating helmets of the relevant types. The sources are, in their majority, clear and well-preserved and allow for consistent analyses of helmet construction, despite a degree of stylization. A source from Italy (E2) and South France (E6) are added to the review due to their high similarity with the Iberian examples. In order to prevent any errors due to misinterpretation of the unclear depictions, they are isolated in a separate group (F).

<sup>10</sup> British Library, *Histoire d'Outremer*, Manuscript BL Yates Thompson 12, f. 75.

*Table 1.* The summary of artistic sources. The coordinates are given in decimal degrees.

No.	year of creation	source description	Coordinates
<b>A. Short enclosed helmets</b>			
A1	1150–1160	Santa María Magdalena, Tudela, Navarre, cornice corbels	42.064994, -1.60396
A2	1175–1200	Monasterio de San Pedro de Villanueva, Cangas de Onís, Asturias, jamb capital	43.366389, -5.151389
A3	1180–1210	Iglesia de San Esteban de Aldehuelas, Sepulveda, Segovia, column capital	41.343744, -3.826269
A4	1190–1220	Nuestra Señora de la Asunción, Sequera de Fresno, Segovia, window tympanum	41.366667, -3.546111
A5	1190–1203	Nuestra Señora del Asunción, Duratón, Segovia, cornice high relief	41.287778, -3.678611
A6	1175–1200	Aguilar de Campoo, Santa Cecilia, Palencia, column capital	42.796064, -4.262414
A7	1190–1210	San Andrés de Gama, Palencia, column capital	42.747778, -4.208333
A8	1175–1200	San Miguel, Sotosalbos, Segovia, cornice high relief	41.035028, -3.943472
A9	1190–1210	Iglesia Santiago Apóstol, Turégano, Segovia, column capital	41.1554, -4.0070
A10	1190–1210	Column capital from San Juan de Acre, Navarrete, La Rioja (currently ruined; the capital is incorporated into the wall of house 2-14, calle Mayor Baja)	42.429167, -2.561111
A11	1175–1200	San Pedro, Caracena, Soria, column capital	41.382083, -3.092361
A12	1180–1220	Iglesia de San Juan Bautista de El Arenal, Orejana, Segovia, column capital	41.159444, -3.768611
A13	1258	Catedral de la Asuncion, Burgo de Osma, Soria, tomb of San Pedro de Osma	41.585389, -3.070564
A14	1186	Seal of Alfonso II of Aragon, Barcelona Municipal Archive	41.382778, 2.176944
<b>B. Tall closed helmets</b>			
B1	1186	San Julián y Santa Basilisa, Rebolledo de la Torre, Burgos, column capital	42.689444, -4.226944
B2	1175–1200	San Vicente de Serrapio, Aller, Asturias, column capital	43.166992, -5.634264
B3	1180–1200	Iglesia de El Salvador, Pozancos, Palencia, column capital	42.714167, -4.227778
B4	1175–1200	Nuestra Señora de la Asunción, Boada de Villadiego, Burgos, column capital	42.572056, -3.966417
B5	1175–1200	San Andres, Revilla de Collazos, Palencia, column capital	42.629722, -4.504167
B6	1176–1200	Monasterio de Santa Cruz de Ribas, Ribas de Campos, Palencia, column capital	42.1431, -4.500
B7	1180–1200	Iglesia del Salvador, Rebanal de las Llantas, Palencia, baptismal font relief	42.891111, -4.625833
B8	1190–1210	San Juan Bautista, Villavega de Aguilar, Palencia, column capital	42.852222, -4.258333
B9	1175–1200	Santa María la Mayor de Fuente Urbel, Burgos, column capital	42.6475, -3.914167
B10	1195	Seal of Alfonso II of Aragon, Archive of the Convent of Santa Ines (Zaragoza)	41.382778, 2.176944
B11	1206	Seal of Pedro II of Aragon, Departmental Archives of Marseille	41.382778, 2.176944
B12	1230-1245	Seal of Ramon Berenguer IV, Count of Provence, French Archives Museum	41.382778, 2.176944

<b>C. Separate Mask</b>			
C1	1150–1160	Santa Maria la Real, Sangüesa, Navarre, portal sculpture	42.577037, -1.285301
C2	1175–1185	Beatus of Cardeña, San Pedro de Cardeña monastery, Burgos, Museo Arqueológico Nacional 1962.73.2	42.304318, -3.607394
C3	1165–1185	Rylands commentary on Apocalypse, John Rylands Library, MS. Lat. 8, fol. 206v, Burgos, possibly executed in San Pedro de Cardeña monastery, Burgos	42.304318, -3.607394
C4	1180–1210	Avila bible, fol. 324v, Biblioteca Nacional De España, VITR.15-1, executed in Avila	40.65, -4.683333
C5	1180–1220	Iglesia de San Juan Bautista de El Arenal, Orejana, Segovia, column capitals	41.159444, -3.768611
C6	1175–1200	Castle of Frías, Burgos, column capital	42.761389, -3.294167
C7	1160–1180	San Vicente Martyr, Frías, Burgos, Doorway, kept at the Met Cloisters Museum, NY	42.761389, -3.294167
C8	1240–1260	Palencia, Museo Provincial, relief on the sarcophagus of Santa María de la Vega, from Santa María de la Vega monastery, Palencia (currently ruined)	42.453611, -4.7025
C9	1181–1190	San Juan del Mercado, Benavente, Zamora, portal archivolt relief	42.003806, -5.677694
C10	1180–1200	Old Cathedral of Salamanca, cloister, Salamanca, column capital	40.96045, -5.66646
C11	1185–1210	San Juan de Acre, Navarrete, La Rioja, column capitals (currently ruined; the capitals are exhibited within the church ruins)	42.429167, -2.561111
C12	1180–1200	San Pedro, Caracena, Soria, column capital	41.382083, -3.092361
C13	1175–1200	Santa María la Mayor, Villacantid, Cantabria, column capital	43.003689, -4.207356
C14	1210–1230	M.429, fol. 149v, The Morgan Library and Museum, possibly executed in Toledo	39.856667, -4.024444
C15	1217	Enrique I (seal), Archivo Historico Nacional Collection	41.382778, 2.176944
<b>D. Special – low back and shallow front</b>			
D1	1190–1210	Santa Maria la Real, Aguilar de Campoo, Palencia, column capital, kept in Mus. Arch. Madrid	42.795889, -4.271836
<b>E. Special – enclosed helmet with open face</b>			
E1	1180–1205	Nuestra Señora De La Antigua de Butrera, Burgos, column capital	41.133333, 14.783333
E2	1100-1150	Ms.724III, Benevento or Montecassino, Biblioteca Casanatense, Italy. Exultet roll	41.324066, -1.811784
E3	1180-1220	Ermita de Santiago, Agüero, Huesca, relief	42.138056, -0.407222
E4	1180-1220	Iglesia de San Pedro, Zaragoza, column capital	41.376389, 2.169444
E5	1190-1210	Monestir de Sant Pau del Camp, Barcelona, column capital	45.744722, -0.624167
E6	1145-1155	France, Saintes (Charente-Maritime), Sainte-Marie-des-Dames, column capital	41.133333, 14.783333
<b>F. Unclear cases</b>			
F1	1180–1203	Santa María de Yermo, Cartes, Cantabria, window tympanum	43.3081, -4.0823
F2	1180–1220	Colegiata de Santa Juliana, Santillana del Mar, Cantabria, column capital	43.392217, -4.106006

F3	1180–1220	Cod. 2-3, Olim [F 169], 15 y F 168, fol. 120r, Spanish Royal Academy of History, executed in San Millán de la Cogolla Monastery, La Rioja	42.329167, -2.862222
F4	1175–1200	Santa María, Siones, Burgos, column capital	43.067222, -3.319167
F5	1175–1200	San Martín de Segovia, Segovia, column capital	40.948958, -4.121919
F6	1200–1230	San Juan de Amandi, Amandi, Concejo de Villaviciosa, Asturias, column capital	43.469197, -5.441911
F7	1200–1230	Ermita De San Pedro, La Losa, Segovia, column capital	40.854444, -4.163056
F8	1180–1210	San Juan de Ortega monastery, Burgos, column capital	42.383333, -3.45
F9	1158–1172	Santa María de Ripoll, Gerona, portal high relief	42.201531, 2.190747
<b>G. Flat-topped early great helm</b>			
G1	1210–1230	BNF Nouv. Acq. Lat. 2290, Arroyo Beatus, executed in San Andrés de Arroyo Monastery, Palencia	42.7006, -4.38167

## PROPOSED HELMET TYPOLOGY

This study combines a sufficient number of well-preserved sources dating from 1150–1230 to identify several fundamental forms. These include:

- A. Short enclosed helmet.
- B. Tall enclosed helmet.
- C. Masked helmet.
  - C<sub>i</sub>. Helmet with a developed nasal.
  - C<sub>ii</sub>. Helmet with a primitive mask.
  - C<sub>iii</sub>. Helmet with a developed mask.
- D. Enclosed helmet, with deep back and shallow front.
- E. Enclosed helmet, with open face.
- F. Unclear cases.
- G. Flat-topped enclosed helmet / early great helm.

*Types A and B.* Being each represented by a significant number of pictorial sources, A and B appear to be distinct forms of helmet that were clearly popular in the Christian kingdoms of the Iberian Peninsula. The detailed inquiry undertaken by this study reveals that A is depicted in 14 sources (Fig. 1), and B in 12 sources (Fig. 4), so that none present unique cases as was suggested by some previous students of the matter (e.g. Nicolle, 1999, Peirce, 1993). Both A and B present tall helmets, usually with a peaky but sometimes with a slightly rounded top, with the bottom edge descending just below the eyes (A) or down to the very chin or even lower (B). The peak can

also curve forward as in the well-known “Phrygian hat” helmets which are well documented in European medieval art. This difference in depth between A and B is generally quite clear even in the sources in a poorer state of preservation; the depth can be judged by the position of the eyes and by the distance between the lower edge of the helmet and the chin or shoulders. Therefore, on the grounds of this crucial shape difference, we will discriminate them as “short” (A) and “tall” (B) enclosed helmets. Helmets of the types A and B are depicted with a variety of eye-hole shapes: round, triangular, egg-shaped, oval, drop-shaped, almond-shaped, but never rectangular or half-circular, as seen on the majority of enclosed helmets in contemporary sources from England, France and Holy Roman Empire. This is a notable Iberian feature. Chin straps are shown in four sources on type A helmets (A4, A5, A11, A12) and never on type B – presumably, type B helmets were deemed to extend so far down that the chin straps would remain hidden: this is another important distinction between the types A and B. Figure 2 reconstructs a pair of type A helmets. The left helmet blends the features of A4 (fluted skull, triangular eye holes) and A12 (chinstraps with three attachment points). The right helmet is based completely on A1b, with the rounded shapes in the front interpreted as encrustation with gems, and the horizontal stripe as a decorative bar (possibly brass or gilt) riveted to the skull. Figure 3 shows a collective impression of several similar sources (A5, A8, A11, A13). Figs. 5–6 show the theoretical appearance of type B helmets; the left panel

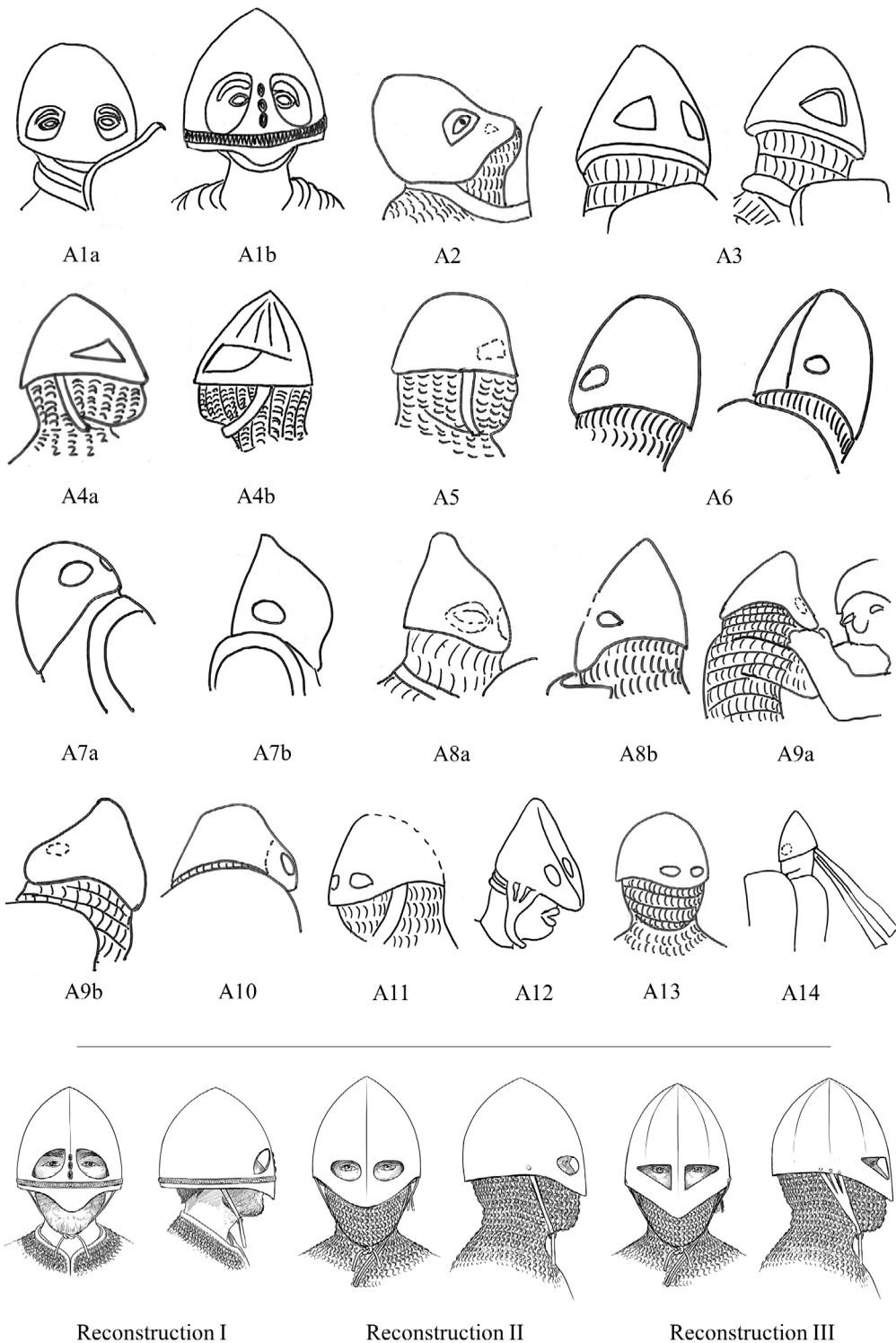


Figure 1. Short enclosed helmets: visual sources and reconstruction sketches. Reconstruction I is based on A1b; II on A5, A8, A11 and A12; III on A4b. Drawings by Pavel Alekseychik and Robbie McSweeney.



Figure 2. Short closed helmet reconstructions based on A4b (left) and A1b (right). Painting by Robbie McSweeney.



Figure 3. Short closed helmet reconstruction based on A5, A8, A11 and A13. Painting by Robbie McSweeney.

presents the sources B3, B4, B5 and B7, while the right panel presents B1.

The construction of helmet types A and B is uncertain and warrants a separate discussion. The depictions of both types have a common puzzling feature of being devoid of any lines which could indicate the borders or seams between the plates, in case there were several. Only one source, A4b, contains a faint horizontal line above the eye holes, which could be interpreted as a border between the upper (skull) and the lower part, not unlike the similar contemporary helmets of France and Germany; however, the quality of the available photo is insufficient to verify this feature. The helmets could, in principle, be raised from one piece or forge-welded, which would explain the lack of clear borders. The extant early 13th century helmets from Gorodets and Nikolskoye (Negin, 2014) provide examples of a skull extending below eye level but raised from a single sheet of metal. However, an alternative interpretation for the lack of plate borders in depictions may be the overall schematic nature of these depictions, which in fact do not usually contain any other fine detail either. Two notable exceptions exist, name-

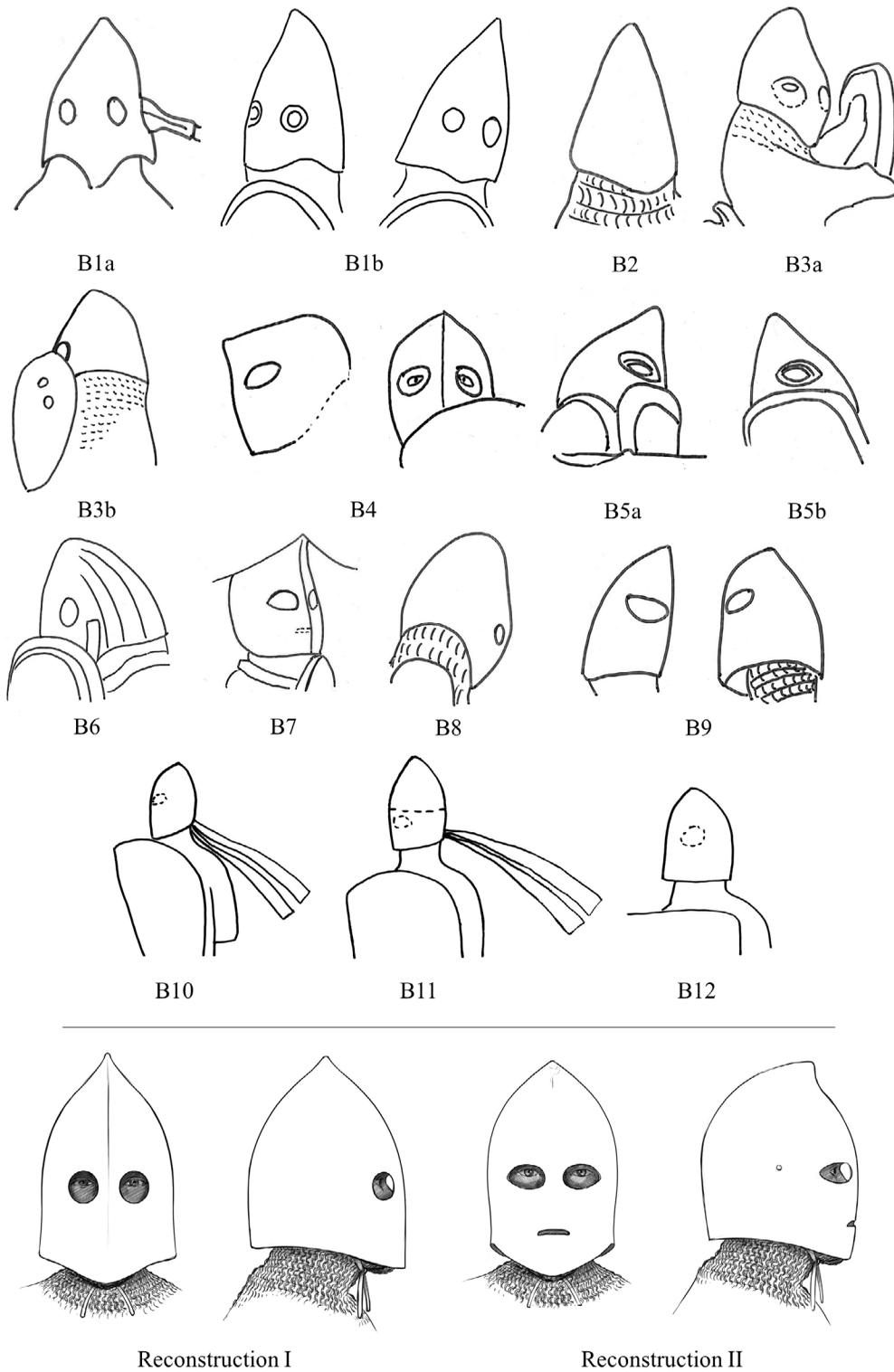


Figure 4. Tall enclosed helmets: visual sources and reconstruction sketches. Reconstruction I is based on B1; II on B3, B4, B5 and B7. Drawings by Pavel Alekseychik and Robbie McSweeney.



Figure 5. Tall enclosed helmet reconstructions based on B1. Painting by Robbie McSweeney.



Figure 6. Tall enclosed helmet reconstruction based on B3, B4, B5 and B7. Painting by Robbie McSweeney.

ly F1 and F2. While both are currently classified as “unclear”, they might well belong to the types A or B. F1a and F1b show a combination of vertical and horizontal lines, while F2 shows vertical bands descending down from the pinnacle, which may or may not imply decorative bands riveted to the helmet body, or indeed riveted seams between the plates. The question regarding the number of plates in A and B thus remains open.

*Type C.* A more familiar kind of masked helmet forms the group C that has many parallels in the rest of Europe (Fig. 7). The main structural feature of type C is the two-piece construction combining a skull with a rigid visor or face-mask. The borders between the skull and mask that are often clearly shown, and/or the sharp angle between these two parts imply that the mask is formed by a separate plate which is affixed to the skull. The construction involving apparently two or three pieces sets these helmets apart from the short enclosed helmets (type A), despite the occasional resemblance in their overall shape. The type C helmets represent several sub-types differing by the shape and construction of the mask:

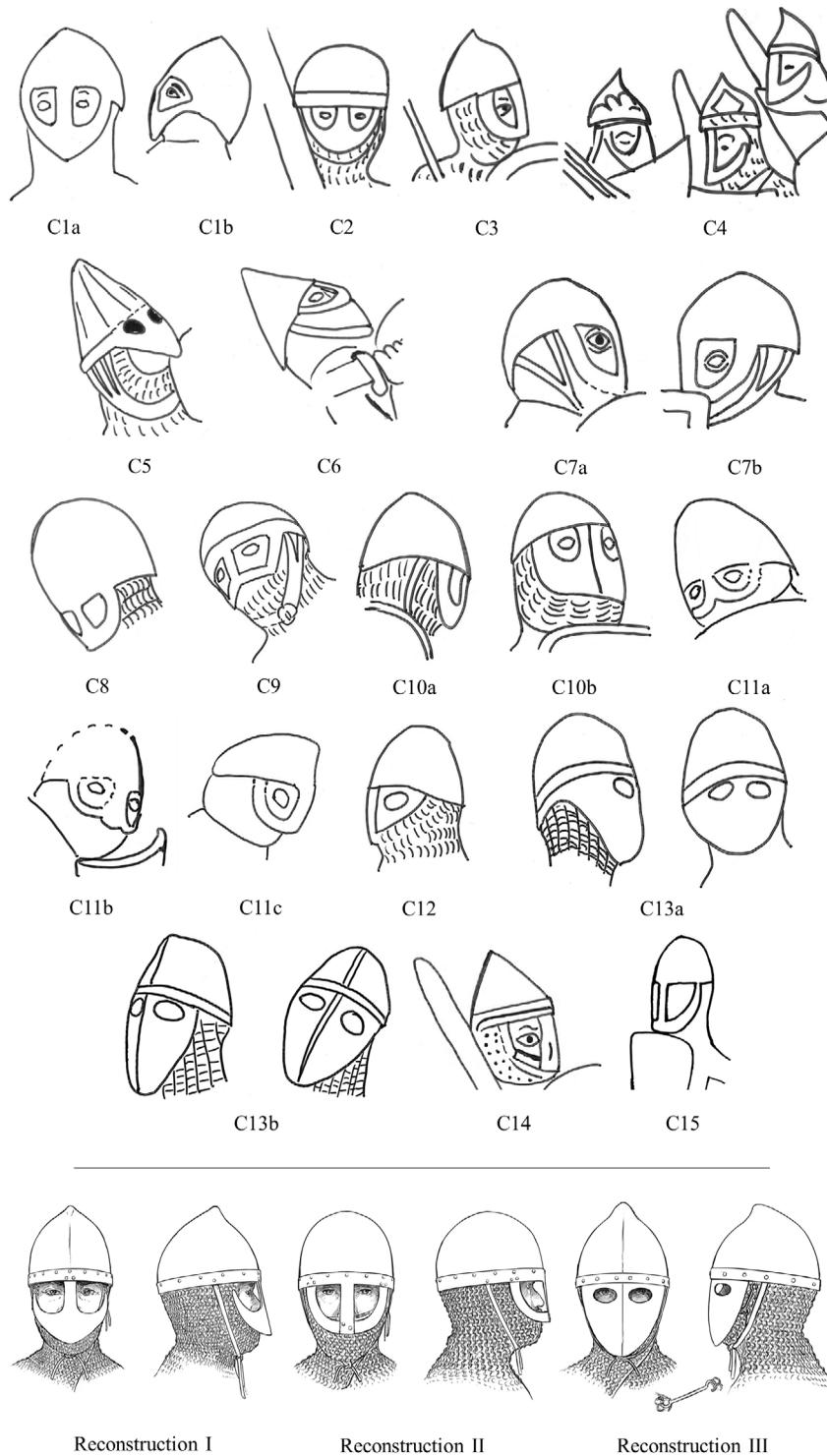
- C<sub>i</sub>: First, the incomplete mask or nasal with side extensions or “whiskers” which are not attached to the skull (C4). A reconstruction is shown in Fig. 8.

- C<sub>ii</sub>: Second, the masks formed by thin bars, still leaving large areas unprotected (C3, C6, C7, C9, C11, C14, C15). Some of these seem to be built around a nasal (C3, C6, C7, C9), reconstructed in Fig. 9, or form two “goggles” for each eye (C11, C14, possibly F9). C8 is a mid-13th century source, possibly attempting to represent the same kind of masked helmet that was then seen as “old-fashioned” by then. A reconstruction is proposed in Fig. 9.

- C<sub>iii</sub>: Third, a complete and larger mask formed by a single piece of steel, with smaller eye holes than in C<sub>ii</sub> (C1, C2, C5, C10, C13). See Fig. 10 for an artistic impression.

The masks of these types are seen attached to base helmets of various geometries, including the “Phrygian hat” with forward-pointing tip, conical and spherical. In this respect, the absence of flat-topped cylindrical helmets with visors is a notable difference from France, England and Germany where such combinations were common in ca. 1180-1220.

*Type D.* The single relief figure found in the column capital from Santa Maria la Real in Aguilar de Campoo is both detailed and very different from all the other helmet depictions reviewed in this study, motivating its isolation as a distinct type. Although only a single source located in



*Figure 7.* Helmets with a rigid mask: visual sources and reconstruction sketches. Reconstruction I is based on C4 and C14; II on C3, C6, C7 and C9; III on C13. Drawings by Pavel Alekseychik and Robbie McSweeney.



*Figure 8.* Masked (in this case, “whiskered”) helmet reconstruction based on C4 and C14. Painting by Robbie McSweeney.



*Figure 9.* Masked helmet reconstruction based on C3, C6, C7 and C9. Painting by Robbie McSweeney.

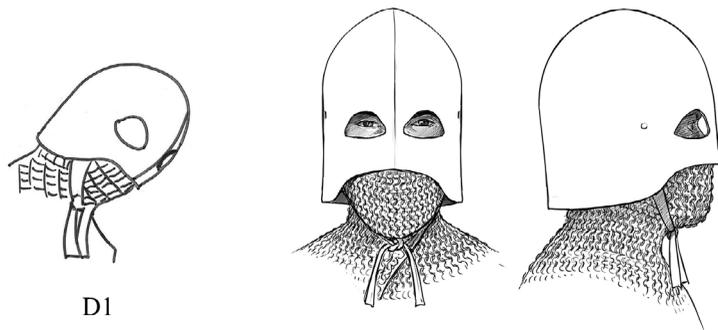


*Figure 10.* Masked helmet reconstruction based on C13. Painting by Robbie McSweeney.

Santa Maria la Real (Aguilar de Campoo, Palencia) is known, this three-dimensional representation of the helmet looks sufficiently reliable, so that the unusual shape is unlikely to be a product

of artistic bias. Nicolle (1999) includes this source and remarks on its uniqueness. While sharing undeniable similarities with the types A and B, this helmet is unusual in combining a shallow front with a deep back, resulting in a sort of cut-out that leaves the mouth and chin protected only by the ventail of the mail coif. Similar to the abovementioned types, type D appears to be raised from a single piece of metal, as the sole representation would suggest. Such a design could be an adaptation to the hot climate of the Iberian Peninsula by enabling better ventilation. Chin straps with a large knot are very prominent. Fig. 5 reconstructs the possible appearance of this helmet. Type E. A further unusual helmet type.

*Type E* is strikingly similar with the bascinets of the 14th century due to its bullet-shaped body combined with a rounded facial opening. However, the helmet geometry in E1–E6 is rather non-uniform. Some varieties seem to curve down and forward, “hugging” the face (E1, E3, E5). Other seem to be swept back, leaving the face more open (E2, E4, E6); these include an earlier French and an Italian source. The vertical lines in E1 are interpreted as decorative bars riveted onto the helmet body (Figs. 11, 13), using the evidence from F2 which may be of a similar type – frustratingly unclear in the available photos! There may



D1

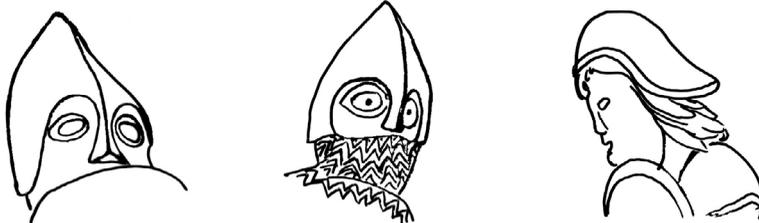
Reconstruction I



E1

E2

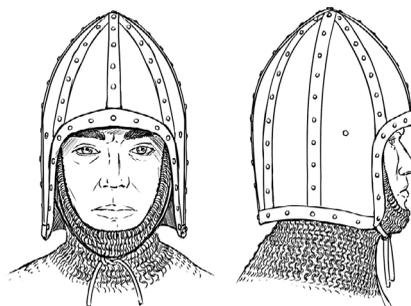
E3



E4

E5

E6



Reconstruction I

Figure 11. Visual sources and reconstructions of special helmet types: a type with a low back and short front (D1) and an enclosed helmet type with open face (E1). Drawings by Pavel Alekseychik and Robbie McSweeney.



Figure 12. Reconstruction of a helmet with low back and short front based on D1. Painting by Robbie McSweeney.



Figure 13. Reconstruction of an enclosed helmet with open face based on E1. Painting by Robbie McSweeney.

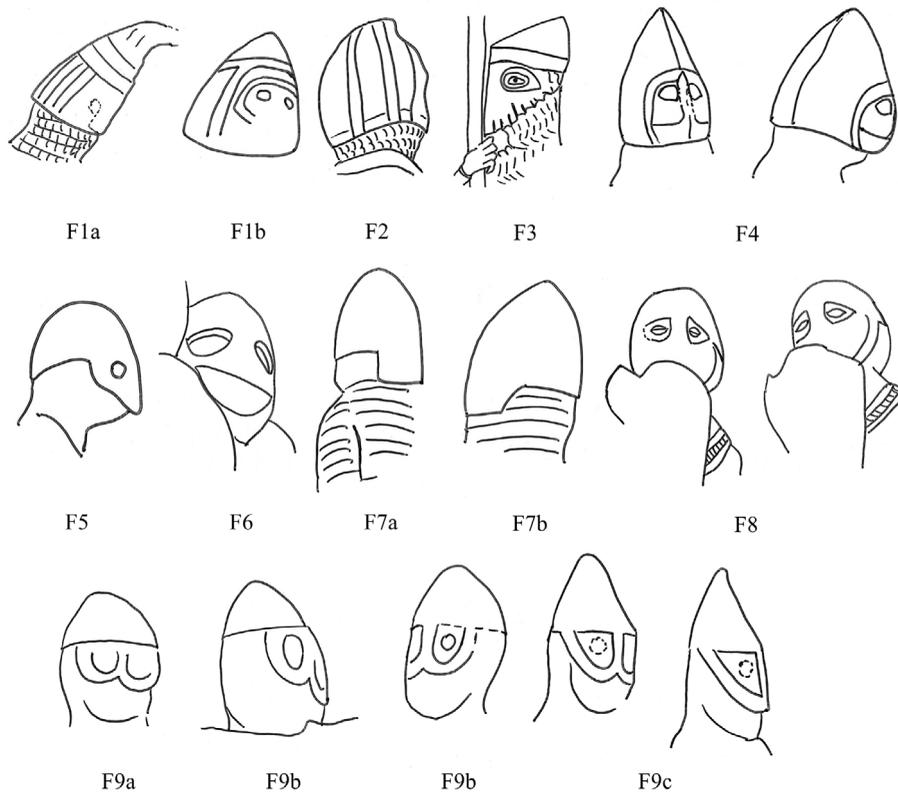


Figure 14. Helmets of uncertain type seen in stylized or damaged art, or illegible due to poor quality photographic material. Drawings by Pavel Alekseychik.

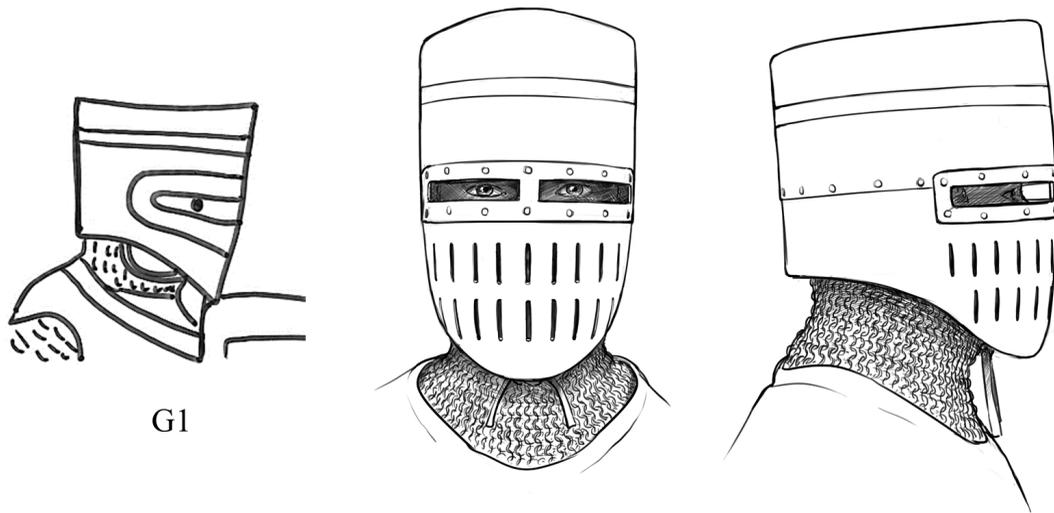


Figure 15. The visual source and reconstruction of a French-influenced early great helm (G1). Drawings by Pavel Alekseychik and Robbie McSweeney.

be some connection between these depictions and the extant Torres Novas helmet mentioned above, although the visual sources of the type E are notably more smooth, implying important structural differences with the Torres Novas find.

*Type F.* The sources collected here likely belong to the types A, B and C, but, unfortunately, are unclear due to damage, disadvantageous point of view, or poor quality of the available photographs. The F sources do provide some valuable detail; in particular, the sources F1, F2, F3 and F4 reveal features that can indicate specific structural solutions or decoration. Better photographic material or discovery of other similar sources will enable revision of the unclear cases.

*Type G.* This manuscript miniature shows a helmet undoubtedly related to the early 13th century developments in France, where such a flat-topped early great helm was being actively introduced (Figs. 15–16). We include it as terminus ante quem for the beginning of French military fashion dominance in the Iberian Peninsula Christian states. The vision slits are surrounded by an overlying horizontal bar, optionally partitioned in the middle by a vertical cross-band, same as in the majority of contemporary sources from elsewhere in Europe. The double horizontal line above the vision slits similarly correlates with the numerous depictions from other parts of western Europe,

where this is used to indicate the border between the top and bottom parts of the helmet, the decorated circlet.



Figure 16. Reconstruction of a French-style early great helm based on G1 and a number of period artistic sources from the rest of Europe. Painting by Robbie McSweeney.

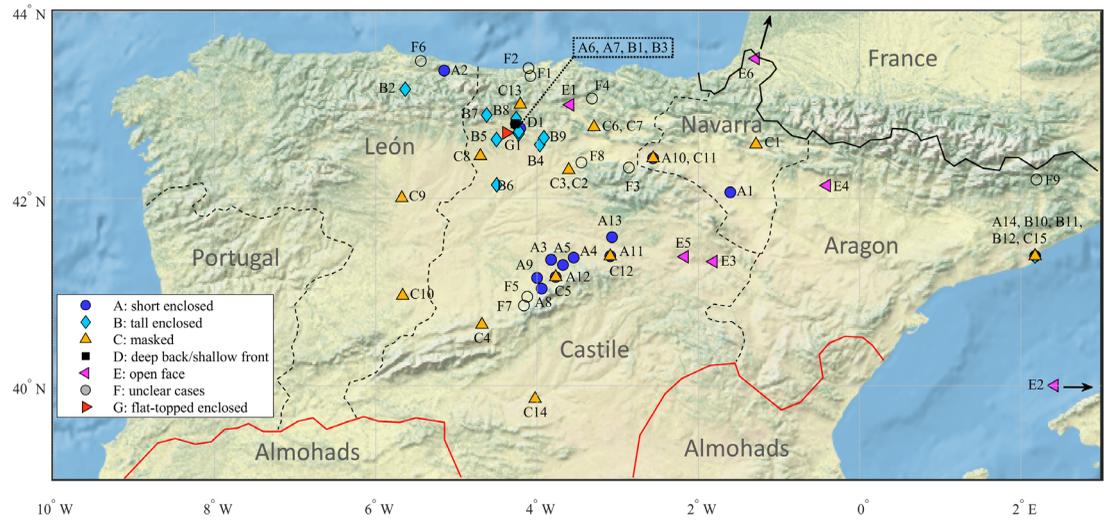


Figure 17. Geographical distribution of the artistic source creation sites. The borders reflect the situation of about 1170 AD.

**CHRONOLOGY AND GEOGRAPHIC SPREAD OF THE HELMET TYPE DEPICTIONS**

The sources in this overview are clustered around the second half of the 12<sup>th</sup> and early 13<sup>th</sup> centuries (Fig. 18). For most, the left tails of the creation date intervals fall between 1175–1190, while the upper ends are generally found between 1200–1220. The wide standard deviations of the dates in the classes A, B, C and F lead to the differences in the temporal distributions (Table 3) being the most part insignificant. Therefore, the different types do not form any apparent chronological sequence, but instead appear to have coexisted during the period 1175–1220.

The visual difference between the large endemic types A and B tempts one to try and form an evolutionary chronology. Despite the above-mentioned overlap in the dates, it is however evident that the short enclosed helmets (A) have production intervals extending to the early 13<sup>th</sup> century in many more cases than tall enclosed helmets (B) (eight cases against three, respectively). However, the mean date of type A sources (1194±2) is also not significantly different from that of the type B sources (1191±2). Therefore, the precedence of type A remains speculative, although A1 (1150–1160) does set a very early *ante quem* date for this helmet geometry.

It is noteworthy that a few sources (A1, C1, C7) have significantly earlier dates than the rest.

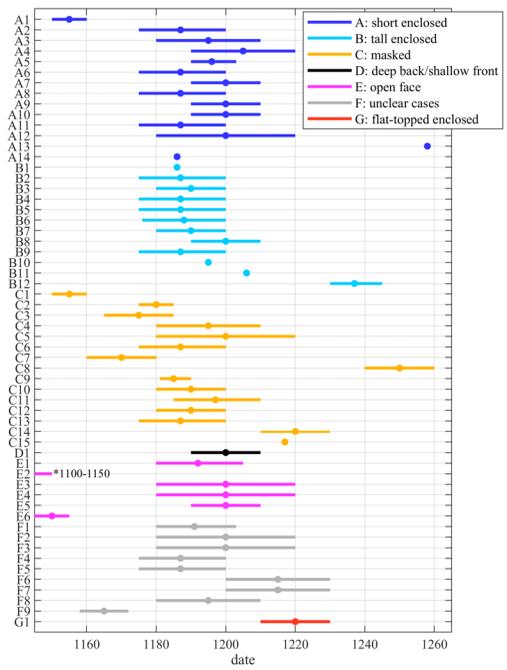


Figure 18. Creation dates of the artworks containing the helmet depictions. The best-guess date intervals are shown with horizontal bars. Dots indicate the mean estimated creation date, or known creation year for A13 and B1. The outliers are excluded (A1, A13, B12, C8, E2, E6).

Believed to have been created between 1150–1160, A1 and C1 thus present the earliest examples of the Iberian enclosed helmet and a masked

helmet, respectively. Even with the later date of 1160-1180, C7 is still one of the earliest European representations of a masked helmet. However, one still cannot assume that the enclosed (A) and masked (C) helmets preceded the other types based on these two early cases, as survival of early sources is controlled by many random factors.

A13 and C8 are reliably dated to the mid-13<sup>th</sup> century and represent intended archaisms designed to stress that the events depicted in these sources happened in the distant past. For this reason, their creation dates lie outside of the period when such helmets were actually used. The same can be said of the seal B12.

The Iberian open-faced helmet sources (type E) have a mean date of 1198±2 years, which is 50-75 years later than the dates of Italian and French examples (E2, E6). This lag may imply that this helmet type was imported into the Iberian kingdoms from France or Italy, but with the small number of sources one cannot be certain.

The flat-topped early great helm (type G) marks the period of 1210–1230, during which the French influence on military equipment was

already widespread enough across the peninsula. At the same time, the endemic Iberian types A and B were not depicted anymore after ca. 1230, with the exceptions of the intentionally archaic A13 and the seal B12 that likely copies its Aragonese precursors (B10, B11).

The map of the sites where the helmet depictions were produced (Figure 17) reveals interesting divisions in the geographical spread of the helmet types. First, highly interesting is the clear separation of the areas in which the helmets type A and B were depicted. These form two main clusters – northern with the type B sources (Asturias, Cantabria, Palencia, Burgos), and southern with the type A sources (Soria, Segovia, Avila). The unique sources representing the endemic type D, as well as the earliest French-style helm source (G) is, too, found within the northern cluster.

In contrast, the masked helmets are represented throughout the extent of the Christian states of the peninsula, especially along their periphery (Zamora, Salamanca, Avila, Toledo). The oldest sources for both the short closed helmet (A1) and the masked helmet (C1) are located in Navarre.

Table 2. Distribution of helmet types per region. STD – standard deviation. \*two further instances of this type are located in Italy (E2) and France (E6).

Helmet types	Asturias	Cantabria	Palencia	Burgos	La Rioja	Navarre	Soria	Segovia	Zamora	Salamanca	Avila	Toledo	Zaragoza	Huesca	Barcelona	Gerona	total
A. short enclosed	1		2		1	1	2	6							1		14
B. tall enclosed	1		5	3											3		12
C. masked		1	1	5	1	1	1	1	1	1	1	1					15
D. low neck/shallow face			1														1
E. open face				1									1	1	1		4*
F. unclear cases	1	2		2	1			2								1	9
G. flat-topped enclosed			1														1
<b>total</b>	<b>3</b>	<b>3</b>	<b>10</b>	<b>10</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>9</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>56</b>

While being the oldest both in Spain and in all of Europe, these fortunate early survivors should not be taken for indicators of the place of origin of these designs. The bascinet-like helmets (E) seem to concentrate in the north-eastern part of the peninsula, the areas most adjacent to the Italian and French representatives of the same type.

### COMPARISON WITH THE SOURCES FROM OTHER PARTS OF EUROPE

Do the above identified helmet types match the artistic sources or archaeological record from other regions of Europe? First, and most importantly, we can now identify two uniquely Spanish types of enclosed helmet: a shorter version leaving the lower third of the head and face open (A), and a taller version protecting the entire head (B). These may be endemic as they have no known credible parallels in the iconography of other regions of the continent. While they share notable similarities with the helmets from Nikolskoye and Gorodets, it has to be completely accidental. However, these from modern-day Russia and Ukraine have fluted skulls descending below eye level and were fluted, providing an interesting archaeological example of the features common with the Iberian helmet type (A), and a testament to the principal ability of the armoursmiths to manufacture such items. The type (D) is similarly unique to Spanish art.

In contrast, the helmets with a separate mask (type C) have multiple contemporary analogues in the art of England, France, the German-speaking countries and Italy (e.g. Nicolle 1999, Alekseychik et al. 2023). Virtually every variety of the type (C) is confirmed by art from these regions, including the masks made of a single sheet of metal or several thin bars, eye-holes of diverse shape, and the various geometries of skull. The “whiskered” subtype (C4, C14) is also very similar to the helmet from Slonim. The helmet found in 1968 in Slonim, Belorussia (Plavinski 2003) remains the only extant, well-preserved High Medieval example of a masked helmet. While its skull has significant similarities with only a small group of Baltic helmets (Plavinski 2003) and is therefore rather distant from the Iberian helmet types reviewed herein, it nevertheless provides direct evidence of a small primitive visor. The unusual feature of the mask of the Slonim helmet is that it is only attached at the center, while the side “whiskers” overlap with the rim of the helmet, but are clearly not attached to it. Therefore, had the “whiskers” been shorter, the

Slonim helmet would have obviously matched the depictions C4 and C14; conversely, with longer “whiskers” touching the skull as they do, it could have been represented in art as having a full mask (e.g. C1, C2, C7, C11).

In regard to type E, we have already noted the similarity with certain Italian and French sources (E2, E6). Those foreign depictions being significantly older than their Iberian counterparts, one could speculate that this peculiar “Romanesque bascinet” originated outside the Iberian kingdoms sometime in the early 12<sup>th</sup> century, and was imported there by mid-12<sup>th</sup> century.

The known external influence on Iberian military fashion, primarily that of France, was the possible reason for such similarity: the cross-border visits to tournaments or on mercenary contracts, contacts during the crusading expeditions, exchange of gifts and trade may have jointly contributed to the early spread of the masked helmet technology from France to Iberian Christian states. By about 1220 at the latest, this influence, now certain, had resulted in a complete departure from the indigenous helmet forms and the adoption of the French models, as evident from the contrast between the source G1<sup>11</sup> and the older helmets of the types A-F.

### DISCUSSION AND CONCLUSIONS

This study has, for the first time, compiled the artistic depictions for the enclosed and masked helmet designs from across the Christian states of the Iberian Peninsula executed in ca. 1150–1230.

The evidence accumulated herein comprises 56 Iberian depictions and allowed identifying six distinct types that were in use during the specified period. See Table 3 for a summary of the helmet types and their main features.

<sup>11</sup> The helmet of Torres Novas, in Portugal, is a model of helmet with a nasal from the 12th-13th centuries, whose rear and side protector was added later, according to studies carried out. Therefore, we would be talking about an element, due to its nature and modification, different from the models listed here. Cf. Barroca, M. J. y Monteiro, J. G. (Coords.) (2000): *Pera Guerrejar – Armamento Medieval no Espaço Português*. Palmela. Câmara Municipal de Palmela, pp. 247-248; Martins, M. (2014): *A Arte da Guerra em Portugal - 1245 a 1367*. Coimbra. Imprensa da Universidade de Coimbra, p. 235; Sousa, A. et al (2020): *Guerreiros & Mártires - A Crisandade e o Islão na formação de Portugal*. Lisboa. Imprensa Nacional Casa da Moeda, p. 198.

The two first types (A, B) more or less completely enclose the head and were possibly made of a single sheet of metal; these helmet types are possibly endemic to the Iberian Peninsula and have no known parallels in the art of the rest of Europe in terms of construction and shape. It is curious and significant that their depictions fall in two main geographical clusters: the “tall” enclosed helmets (type B) were represented in the art of northern Castile and Leon, while the “short” enclosed helmets (type A) appear in central Castile. Tentatively, the type B helmet depictions are also older, on average, than those of type A.

A highly unusual type D, known from a single column capital produced in about 1200, an open-faced type of helmet, the “Romanesque bascinet” (type E), was contemporary with the endemic Hispanic types and has parallels in French and Italian art. The French and Italian examples are considerably older than those from

The four special helmet types that we hypothesize are endemic to the Iberian Peninsula (A, B, D, E) largely disappear in the art during the early 13<sup>th</sup> century. However, the region also saw the use of visored helmet forms common with France and other more distant parts of Europe. The masked helmets (C) are also widely represented throughout the Christian states of the Iberian Peninsula and cover the entire period under consideration. We found sufficient grounds to subdivide the masked helmets into three subtypes, developed nasal (C<sub>i</sub>, with “whiskers” or T-shaped extensions); primitive visors made up of thin bars (C<sub>ii</sub>) and developed visors shielding most of the face (C<sub>iii</sub>).

Finally, the early flat-topped early great helm depicted in the miniature of ca. 1210-1230 (G1) marks the eventual domination of the French military fashion over the local styles. There is no other Iberian pictorial source for such a classical bucket-shaped helm until ca. 1230; the next oldest source, to our knowledge, is the seal of Ferdinand III of Castile, which is attached to a document of 1237 (J 599 n°2, Archives Nationales, Paris), although the seal was used from an earlier year, perhaps about 1230 (Español, 2023).

The relatively high areal density of pictorial sources for helmets with developed facial protection in the region, especially in center of the Christian kingdoms (Leon and Castile), is the fortunate circumstance that largely enabled the present study. We owe this to the high degree of preservation of Iberian Romanesque art, first of all of the sculpture in cathedrals, monasteries and provincial churches and chapels. Noteworthy is the

survival of some very old sources, namely type A helmet in Santa María Magdalena, Tudela and a masked helmet (type C) in Santa Maria la Real, Sangüesa, both dated 1150-1160. It is tempting to propose that these helmet styles were of peninsular origin, but the recent findings by Alekseychik et al. (2023) point at the probable existence of masked helmets in other parts of Western Europe in the mid-12<sup>th</sup> century. The date span of the bulk of the sources in this study, ca. 1175-1210, also largely overlaps with the dates of the other equivalent western European sources, and it is therefore impossible to determine which region pioneered the closed face helmet technology. Due to the lack of Islamic finds in the Iberian Peninsula, and the aniconism of the Islamic art, we are likewise unable to tell with any certainty if the reviewed helmet types were used by Muslim warriors, although given the reality of cross-border diffusion of technology, one ought to expect that it did happen to a certain extent. A parallel technological diffusion must have taken place in ca. 1150-1200 across the border between France and Navarre/Aragon/Cataluña. In fact, our analysis does include a seal of Ramon Berenguer IV as Count of Provence, a representative of the Aragonese nobility whose close connections with southern France helped export the Iberian helmet styles – among some other elements of knightly panoply which lie beyond the scope of the present study.

Interesting features that are rare or unique in European art and military history are encountered in the body of examined artistic sources. A characteristic Iberian feature is that eye holes are always non-rectangular, in stark contrast with the sources from the other parts of Europe where they, too, seem to have been non-rectangular at first, but attained a rectangular shape already by the later 12<sup>th</sup> century. Another characteristic feature is the apparent absence of breathing holes. This is somewhat surprising, given the hot climate of the Iberian Peninsula, and the ubiquitous representations of breathing holes elsewhere in Europe. However, Fig. 3 tentatively interprets a horizontal feature in B7 as a breathing slit, as the former does not seem to have been caused by damage. Also, the small triangular detail below the eye in A2 could also be a breathing hole. The evidence in B7 and A2 remains inconclusive. There is a possibility that the breathing holes were omitted by the artists as part of the local canon. Thirdly, three-fingered chinstraps are twice depicted in column capitals of the same church San Juan Bautista de El Arenal in Orejana, Segovia (A12 and C5). Such chin-

straps have no parallels in other European art that shows only the straps with one or two attachment points. Fourthly, a rare instance of a closed-face helmet worn without a mail coif is shown in A1b and A12. The English, French and German sources almost always portray the wearers of masked or enclosed helmets as having mail coifs, as per their knightly status. The soldiers may have rid themselves of mail coifs to increase air circulation on hot days. Fifthly, there is a conspicuous absence of flat-topped skulls, which in late 12<sup>th</sup> century France, Low Countries, England and Germany become the most frequent basis for visored helmets. Virtually every other form of skull is in evidence, except for flat-topped cylindrical. In some cases, the lines or ridges radiating from the helmet pinnacle may be interpreted as fluting, as seen in A4b, B6, C5, and E1.

In summary, the current study benefited substantially from the use of a maximally large database of helmet portrayals in visual art, which allowed isolating several groups of helmets identified by recurring significant features in their overall shape and internal detail. The study confirms the coexistence of several special forms of knightly helmet in Iberian Christian kingdoms during 1150-1230 prior to the period of French cultural dominance. Further study of 12<sup>th</sup>-13<sup>th</sup> century military equipment in the territory of modern-day Spain is required to establish the other endemic features, and the role of the potential influences from the Islamic states of the Iberian Peninsula, France and other parts of Europe in the development of regional military culture. Our experience tells that novel results may be achieved by the use of large primary source databases, as demonstrated in this study.

Table 3. Summary of the helmet types identified in the study. STDM – standard deviation of the mean. The main period of depiction and mean year of depiction are given excluding the late outliers.

Type	Construction notes / list of visual sources	Main period of depiction	Mean year of depiction ± STDM	Geography of depictions	Drawing
A. Short enclosed helmet	Round, lenticular or triangular vision holes. Too short to need breathing holes. Raised from a single piece of metal, or separate skull and visor plate. Sources: A1-A14	1150-1220	1194±2	North-Western cluster: Asturias, Cantabria, Palencia, Burgos, Barcelona	
B. Tall enclosed helmet	With round or lenticular vision slits, and possibly without breathing holes, except in two not very clear cases. Possibly raised from a single piece of metal. Sources: B1-B12	1175-1210	1191±2	Central cluster: Soria, Segovia, Avila, Barcelona	
C <sub>i</sub> Helmet with a developed nasal	Extensions to both sides of the nasal, forged as a single piece with nasal or maybe added later to a basic nasal. The “whiskers” do not reach the helmet rim. Sources: C4, C14	1180-1230	1205	South-west: Avila, Toledo	

<b>C<sub>ii</sub></b> . Helmet with a primitive mask	Rounded bars added to the pre-existing nasal, or attached as stand-alone goggles. Sources: C1, C3, C7, C9, C11, C15	1150-1217	1183±8	Center and West: Navarre, Burgos, Zamora, La Rioja	
<b>C<sub>iii</sub></b> . Helmet with a developed mask	The mask covers the entire face; breathing holes possibly absent. Sources: C2, C5, C8, C10, C12, C13	1175-1220	1189±3	Center, West and North: Burgos, Segovia, Palencia, Salamanca, Soria, Cantabria	
<b>D.</b> Enclosed helmet with shallow front	A highly unusual type of helmet with deep back and shallow front. Lenticular vision slits. Otherwise similar to the types A-B. Source: D1	1190-1210	1200	North-west: Palencia	
<b>E.</b> Enclosed helmet with open face	A helmet with open face, with or without reinforcement bars and a nasal. Overall shape similar to the later bascinet. Sources: E1-E6 (including E2 from Italy and E6 from France)	1180-1220	1198	North-east, east: Burgos, Huesca, Zaragoza, Barcelona	
<b>F.</b> Unclear cases	The less clear depictions of helmets resembling the types A, B, and C. Sources: F1-F9	–	–	–	–
<b>G.</b> Early great helm	A cylindrical, flat-topped helm with French influence, with rectangular vision slits and even rows of breathing holes in the lower part of the face plate. Sources: G1	1210-1230	1220	Center-west: Palencia	

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