

An unknown treasure: the Pinhel bascinet

Un tesoro desconocido: el bacinete de Pinhel

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ABSTRACT - RESUMEN

Medieval arms and armour in Portugal have, for the most part, been lost to time. Few pieces are kept in Portuguese museums, fewer still have ever been unearthed by archaeology or happenstance. Perhaps the most remarkable of these is the helmet housed in Pinhel's Municipal Museum: a great bascinet whose provenance is as obscure as the helmet itself is unique. The aim of this paper is to present this fascinating piece in detail and, by comparing it with other extant specimens, to put forward proposals for dating it, as well as what it might have looked like when new.

La mayor parte de las armas y armaduras medievales de Portugal se han perdido en el tiempo. Pocas piezas se conservan en los museos portugueses, menos aún han sido desenterradas por la arqueología o por acaso. Tal vez la más notable de ellas sea el casco conservado en el Museo Municipal de Pinhel: un bacinete cuya procedencia es tan oscura como el propio casco es único. El objetivo de este artículo es presentar en detalle esta fascinante pieza y, comparándola con otros ejemplares existentes, presentar propuestas para su datación, así como su posible aspecto en su época de utilización.

KEYWORDS - PALABRAS CLAVE

Helmet; great bascinet; Portugal; metal finds; Medieval.

Casco; bacinete; Portugal; hallazgos metálicos; medieval.

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1. A CHANCE FIND

Sometime during the 1960s, an anonymous resident of Pinhel — a small town in the Guarda district of Portugal, overlooking the border with Spain (Fig. 1) — spotted a peculiar object on a heap of rubble near the local castle, left behind after construction works. The exact location in which the object was purportedly found is not known; these construction works took place either near the castle, according to its corresponding entry in the *Pera Guerrejar* catalogue (Barroca *et alii*, 2000: 249) or inside the castle itself, according to the current director of Pinhel's Municipal Museum, Mr. Laurindo Monteiro.¹ The second location would appear more likely, if nothing else because the castle's courtyard has been used as a rubbish dump throughout its existence.² Whatever the case, the bascinet — which, at the time of its discovery, was reported to have had pieces of a visor still attached to it (Barroca *et alii*, 2000: 249)³ — was taken home by its discoverer. It was only retrieved by municipal authorities sometime later, after the man was caught wearing it to a Carnival parade.⁴ After its retrieval, the visor fragments are said to have been used to repair and consolidate the skull (Barroca *et alii*, 2000: 249).



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Figure 1. Pinhel's location in Portugal, along the border with modern-day Spain.

¹ Personal interview conducted on 5 February, 2020, during our visit to the museum.

² Excavation works from the 1990s onwards have yielded a few artefacts from the 14th-18th centuries, currently displayed within the Municipal Museum, including a heretofore unidentified piece of metal currently displayed next to the bascinet, as per Figure 2. After consulting with Robert MacPherson and Tobias Capwell, who shared the authors' suspicions towards this mysterious piece, the authors feel confident enough in putting forward an identification as an enclosed upper cannon of an English style arm harness. On this style of arm harness, see Capwell, 2015: 141. The authors will publish a more detailed study on this piece at the earliest convenience.

³ Corroborated by the current director of Pinhel's Municipal Museum, Mr. Laurindo Monteiro.

⁴ According to Mr. Laurindo Monteiro, see note 2.

Or so the story goes. This is unfortunately the extent of what we know about this bascinet — most of it hearsay, with little to no official corroboration. We do not know who found it and how, what means were used to excavate it, not even the archaeological context in which the discovery took place. The bascinet itself is in poor condition, which creates a number of difficulties in studying it. Understandably, and in spite of its historical importance, exceedingly little has been written about it; the bascinet has been mostly ignored by Portuguese historians⁵ and is all but unknown outside of Portugal. This brief study will attempt to correct that situation by presenting a full technical report on the bascinet, along with a hypothesis for its dates of production and use, and an attempt at reconstructing its missing elements.



Figure 2. The helmet in situ in its display case. © Município de Pinhel

2. BASCINETS AND GREAT BASCINETS IN EUROPE AND PORTUGAL

The helmet that would eventually become known as the bascinet appeared sometime in the late 13th century, as a derivation from the *cervelliere* — a skullcap of iron or steel — worn by itself or under the knightly great helm of the 13th and 14th centuries (Blair, 1979: 47). Like the *cervelliere*, early bascinets were rounded and fitted rather tightly against the wearer's skull. Bascinetes were normally worn with aventails or camails — curtains of mail laced to the bascinet through small staples (*vervelles*), which covered the chin, neck, shoulders and most of the face, leaving only a warrior's eyes, nose, and mouth exposed. Both the bascinets and the aventails were fitted with padded linings, to provide comfort, ease of adjustment, and another layer of protection over the head, neck and shoulders of the wearer (Riquer, 2011: 200-201). The aventails themselves could bear a decorative textile covering known as a *hourson* or *vrysoun* (Moffat, 2022b: 257; Woosnam-Savage, 2017: 34). Bascinetes could also (and often did) feature visors, held in place by either a single vertical bar over the brow — the so-called *klappvisier* system, particularly common in the Holy Roman Empire and Western Europe, but altogether uncommon or absent in other regions, including the Iberian Peninsula (Blair, 1979: 68-69) — or more usually by two hinges pivoting either side of the helmet (Strong, 2018: 151). A variety of visors were employed during the first half of the 14th century, but by the second half the most typical form was a visor drawn out into a conical point, akin to a beak — a shape erroneously dubbed 'hounskull' by early and current

⁵ Apart from its inclusion in the *Pera Guerrejar* exhibition and catalogue in the year 2000 (Barroca *et alii*, 2000: 248-250), the bascinet has only been shown to the public in 1982-1983, as part of the XVII European Exhibition of Art, Science and Culture held in the Jerónimos Monastery in Lisbon (*Os Descobrimentos Portugueses*, 1983: 79).

scholars of arms and armour (Moffat, 2022a; Retsch, 2020). By the middle of the 14th century, the bascinet had become the most widespread type of helmet in Europe (Capwell, 2015: 66; Riquer, 2011: 72; Woosnam-Savage, 2017: 36), a role it would maintain well into the first decades of the 15th century. During this long period of use, the bascinet's shape underwent several changes. By the middle of the century, the early, rounded types of bascinet gave way to pointed skulls with tall apexes, which extended downwards at the rear and sides to protect the neck and the cheeks. Bascinetes from the last quarter of the 14th century featured particularly pointed profiles, with exaggerated apexes placed high over the crown of the head, creating quasi-straight vertical lines from the top of the skull to its bottom at the back of the neck (Soler del Campo, 1993: 107).

The bascinet's ubiquity also exposed its main weakness: the warrior's throat, protected only by the aventail, remained an enticing target for enemy attacks, be it by lance, arrows or quarrels (Baptiste, 2022: 71; Capwell, 2015: 85). Consequently, it was necessary to devise ways to enhance the throat's protection. The second quarter of the 14th century saw attempts to build aventails out of small scales or pieces of plate, instead of mail (Baptiste, 2022: 71; Capwell, 2015: 85); and in the first years of the 15th century bascinets were paired up with separate standing collars of plate, hinged on the side, which could protect the entire throat and neck, including the top of the spine, whilst allowing the head to rotate freely (Capwell, 2015: 91). In the beginning of the 15th century, however, some bascinets were fitted with throat plates instead of, or as a complement to, the mail aventail (Hoffmeyer, 1982: 265). This pairing would bring about a series of changes to the bascinet itself in the following decades, and eventually give rise to what modern scholars refer to as 'great bascinets' (Blair, 1979: 70; Capwell, 2015: 95). The added weight of the ensemble, for example, would prompt the bascinet's tail to widen and be drawn over the top of the back of the wearer (Capwell, 2015: 95), shifting the helmet's weight from the head to the shoulders (Laking, 1920: 254). The face opening became narrower, an effect sometimes achieved by adding a chin or throat plate to the bascinet's skull, and the great bascinet's overall silhouette gradually became more and more rounded, closer and more tight-fitting to the human head. By *ca.* 1450, most great bascinets had lost their tipped apexes⁶ and adopted quasi-globular shapes, graciously curved to follow the contours of the head and neck. This is the shape they would retain until they were superseded for field use by the armet and the sallet.⁷

It is difficult to pinpoint when bascinets first appeared in Portugal. Given the fact that they are known in Castile and Aragon sometime between the late 13th century and the first quarter of the 14th century (Solana, 2024: 168-171; Soler del Campo, 1993: 105), and that by 1340 they are regularly included in Portuguese wills and inventories (Martins, 2014: 236), it is reasonable to assume that their adoption by the Portuguese took place at least one, perhaps two decades before that date, sometime during the first quarter of the 14th century, according to available sources. Though documentary and iconographic references are rare during this period,⁸ by the second half of the 14th century there is ample evidence suggesting that bascinets were perhaps the most predominant type of helmet in the Portuguese arsenal, particularly after the military reforms instituted by King Fernando I (Agostinho, 2013: 63; Martins, 2014: 236; Monteiro, 1998: 535) — who, awed and perhaps somewhat dismayed at the state of his own forces after seeing the knights of Bertrand du Guesclin's White Company in 1373, ordered “os que eram bem armados”⁹ to replace their *capelinas* (war hats) with “barvuda com camalhom” (visored bascinets with aventails), along with other changes in equipment (Lopes, 1975: 305). The bascinet, in its many forms and period designations — *bacinete de camal* (bascinet with an aventail), *bacinete de cara* (visored bascinet), *bacinete de beibeira* (bascinet with a bever), or even *barbuda* and *bacinete de cara e camal* (both meaning visored bascinet with an aventail)¹⁰ — was inextricably linked to

⁶ Although some later bascinets, such as inv. no. 04.3.240 specimen from 1450 in the Metropolitan Museum of Art, New York's collection, still featured tall defined apexes, these seem to have been in a clear minority.

⁷ They would remain in use, with modifications, for tournaments and other martial games until the 16th century, as attested to by several specimens, including the Metropolitan Museum of Art's inv. nos. 04.3.248 or inv. No. 04.3.274, or the specimen from the Palais du Coudenberg, Brussels (Gaier, 2014: 187-225).

⁸ The helmet worn by the equestrian statue of the knight Domingos Joanes, from the Capela dos Ferreiros in the town of Oliveira do Hospital, completed in 1341 (Almeida and Barroca, 2002: 204-205) is often referred to as a bascinet in Portuguese historiography (Monteiro, 1998: 533; Barroca *et alii*, 2000: 92, fig. 15; Almeida and Barroca, 2002: 205) though in our opinion it is instead a rare depiction of a rounded great helm with a barber (a reinforce for the lower part of the face; see Moffat, 2022b: 225). One of the sleeping Roman guards of the *Christ in the Tomb* in the Machado de Castro National Museum, inv. no. 851, from *ca.* 1350 based on the arms and armour shown (despite later dates given by art historians: Dias, 1986: 11; Almeida and Barroca, 2002: 188), appears to be sporting a proto-bascinet with a 'welder's mask'-type of visor. Otherwise, the first unequivocal depictions of bascinets in Portuguese art can be seen in the sculptured reliefs of scenes of the New Testament on the remarkable tomb of Inês de Castro in the Monastery of Alcobaça, from *ca.* 1360, on the heads of the Roman legionnaires in the *Kiss of Judas*, *Passion* and *Calvary* (Camacho de Barros, 2021; Fernandes, 2013, amongst others).

⁹ Lit. “those who would be properly armed” [our translation], meaning knights and wealthy men-at-arms.

¹⁰ Though the term 'barvuda' or 'barbuda' has been interpreted as a mail attachment by scholars in other areas of Europe (Boccia *et alii*, 1982: 25; Riquer, 2011: 71-72), there is a consistent body of evidence to indicate that, in Portugal, *barbuda* was the name given to the ensemble formed by a bascinet with its corresponding visor and aventail, in perfect agreement with chronicler Fernão Lopes's words:

heavily armed and mounted men-at-arms, so much so that Fernão Lopes employed *bacinete* as a byword for late 14th century mounted knights and men-at-arms (Lopes, 1977a: 350; 1977b: 153; Agostinho, 2013: 65-66). The bascinet was not the preserve of the elites, however; as elsewhere in Europe (Blair, 1979: 67), the bascinet became the standard helmet of the late 14th century and early 15th century for all classes of combatant. The Franciscan Friar Pedro's speech after the victory at Aljubarrota in 1385 describes how "os portugueeses (...) eram prouemente e mal amanhados (...) muytos delles com bacinetes sem caras;"¹¹ bascinets were the only type of helmet prescribed in a 1385 roll of crossbowmen in the provinces of Alentejo and Algarve, in which they were required to own "100 passadores, e dous dardos, e senhos baçinetes de face, e mais nao;"¹² and they were also the only type of helmet mandated for Portuguese *acotiados*, or urban militias, in the early 15th century (Monteiro, 1998: 49). Bascinets were kept in use in Portugal well into the 15th century, as attested to by a 1455 quittance issued to Gonçalo Afonso, *almoxarife* (overseer) of Lisbon's *Almazém* or Royal Arsenal, which lists thousands of bascinets stored there between 1438 and 1448 (Monteiro, 2001: 31; 45).¹³ During the third quarter of the century, the bascinet was quickly replaced by *barretas* (war hats) and *celadas* (sallets) and faded into obscurity (Agostinho, 2013: 74-76), leaving little to no further traces (that the authors could find) of its presence in Portuguese armouries.

Written sources seem to make a distinction between regular bascinets and great bascinets. It is practically certain that the *bacinetes de bebeira* (bascinets with a bever) prescribed in the legal corpus of the *Ordenações Afonsinas* (OA, 1998: 474, Book 1, title LXXI) and other contemporary royal charters (DAHL, 1958: 261),¹⁴ alongside *bacinetes de camal* (bascinets with an aventail), were great bascinets,¹⁵ following similar nomenclature in other regions of the Peninsula (Riquer, 2011: 319). What few visual sources we have from the period seem to suggest that great bascinets were rather fashionable in Portugal. The earliest known depiction of a full plate harness in Portugal, that of a Saint George of the Eira Pedrinha altarpiece (Fig. 3) from 1398 (Serrão, 2016: 22-23), located in the church of the same name in the district of Coimbra, includes a great bascinet with a fluted skull. The bascinet is shown without its visor, though the staples and the decorative pivot rivet where one would have been fitted are plainly evident. Interestingly, this specimen shows the bascinet with an integral 'plate aventail', clearly separate and distinct from the mail strip around its bottom edges, which covers the saint's chin, neck, upper chest, and top of the shoulders.

"bacinetes com estofas, e camall de malha com cara posta, e chamavomlbe *barvudas*" ("bascinets with liners, and aventail, with their visors, and they called them *barvudas*" [our translation]) (Lopes, 1977a: 87-88). This question, which has been but lightly touched upon by other scholars (Monteiro, 2003: 188; Agostinho, 2013: 63), is soon to be addressed at length in an upcoming paper on Portuguese *barbudas* written by one of the authors, currently under the working title "Uma Questão (de) Barbuda(s)".

¹¹ As told, if not wholly devised, by the royal chronicler Fernão Lopes (Lopes, 1977b: 118-119).

¹² "100 quarrels, and two javelins, and their bascinets with faces [visors], and nothing further" [our translation]. The roll is transcribed in Alves Dias, 2023: 138-140.

¹³ In spite of the Quittance listing bascinets and other types of helmets separately, some of the many bascinets listed could in fact have been early types of sallet. *Bacinete* was occasionally employed as a catch-all term for helmets during the 15th century: in 1485, long after they had fallen out of use, King João II decreed that any resident of the city of Porto recruited to serve him in war would need "jubanete ou solhas com seu capacete e babeyra ou *bacynete frances* com sua babeyra e falldras e gocetes de malha ou armaduras brancas de braços e asy de pernas" (brigandine or coat-of-plates with its war hat and bever or a *French bascinet* with its bever and mail skirt and mail voiders or full plate arm harness as well as legs" [our translation]), in Ribeiro, 2019: 293-294. This 'French bascinet' was most likely a visored sallet, perhaps like the sallet depicted at the feet of the gisant of Juan Nuñez Dávila in Ávila Cathedral, described in his will as a 'celada francesa' (French sallet) (Ruiz-Ayúcar *et alii*, 1987: 26). See also Baptiste, 2022: 121-122.

¹⁴ As Nicolas Baptiste put it, in most of Europe (England, France, the Burgundian territories, the Holy Roman Empire or the Italian states) "aucun texte d'ordonnance ne les mentionne pour les équipements de guerre" ("no ordinances mentions them as pieces for war" [our translation]) (Baptiste, 2022: 146), which makes these ordinances all the more relevant, as they are direct evidence of the use of great bascinets in Portuguese warfare.

¹⁵ Although these *babeiras* could also have been separate pieces of plate, as mentioned before, the use of the preposition 'de' (lit. 'of') indicates in medieval and in modern Portuguese that the bever is regarded as a component part of the bascinet itself, instead of a separate piece. Where two distinct and separate pieces are brought together for use, the preposition 'com' (lit. 'with') tends to be used instead. *Exempli gratia*: a 1420 list of equipment sent from Lisbon to the recently conquered city of Ceuta, which included, amongst others, "huum baçnete de baueira ssem cara jtem outro baçnete de camall com cara e camall" [one bascinet with a bever, without its visor; item, another bascinet with an aventail, with its face and aventail] but also "hũa peça com seus allões çarrada de tras E Deante" [one breastplate with its side plates closing at the back and in front] and "soolhas em pano de ssarapilheira branca com seus mangotes" [a pair-of-plates covered in white burlap with its sleeves]. See Castro, 2015: 48, 51 and 53, respectively.



Figure 3. Saint George from Eira Pedrinha, 1398, church of Eira Pedrinha. Photo by the authors.

One illustration of a manuscript of the *Crónica Geral de Espanha de 1344* (Fig. 4) in Lisbon's Academy of Sciences (inv. no. Manuscrito 1, Série Azul), critically dated to 1430-1440,¹⁶ also includes a similar great bascinet on the floor, behind the legs of a warrior. The bascinet's face opening is not depicted, but, considering where the fairly tall apex is placed in relation to the viewer, the bascinet seems to have been drawn from the side, and it too shows a wide plate aventail.



Figure 4. The battle between Martim Gomez and Rodrigo Díaz de Vivar, *El Cid*, from the *Crónica Geral de Espanha de 1344*, ca. 1430-1440, fol. 190r © Academia das Ciências de Lisboa / Bridgeman Images (with our thanks).

¹⁶ The dating of the manuscript is somewhat contentious, but most authors set its creation around these two decades. See Tibúrcio, 2016; Pandiello Fernández, 2021: 227-228. For our part, nothing in the manuscript, especially its depictions of clothing and armour, suggests a production date before 1420 or after 1450.

Finally, another Saint George from the 1440s (Fig. 5), from the Chapel of Saint George in Marecos, district of Porto (Barroca, 2015), sports yet another similar great bascinet to the Eira Pedrinha specimen, including the salient staples and, most importantly, a plate aventail. Unlike the other two, this bascinet is more close-fitting to the head, with a refined medial ridge instead of a pronounced apex. An analogous bascinet can be seen on the head of the eponymous saint in the 15th century altarpiece of the Chapel of Saint George in Lemedé, in the town of Cantanhede (district of Coimbra), which, like the Saint George from Marecos, was directly inspired by the Eira Pedrinha altarpiece.¹⁷



Figure 5. Saint George from the church of Marecos. © EGEAC / Paulo Alexandrino (with our thanks).

These four great bascinets, all from the same forty-year period (1400-1440), share a good number of similarities, particularly a skull and throat plate which seemingly form a large, continuous whole, much like those of the Pinhel artefact. It could be argued that, since two of these four depictions derive their basic design from the Eira Pedrinha altarpiece, these depictions artificially inflate our perception of great bascinets in Portugal — even though each bascinet, and each Saint George, is different from the others. Likewise, artistic limitations may have played a role in how each of these works was made; individual throat plates and edges may have been deemed unnecessary or hard to define in such small surfaces and hard-to-work media. Nonetheless, it is curious how much these depictions seem to have in common with the Pinhel specimen, as we shall see below.

3. TECHNICAL DESCRIPTION

3.1. Overall Examination

The Pinhel helmet (Museu Municipal de Pinhel, inv. no. 768) consists of a one-piece skull, with attached fragments of additional plates either side of the throat and pivot holes at the temples for a missing visor — thereby unequivocally establishing it as a great bascinet. The helmet as a whole is in a fragile and poor state of preservation. Because of this, it was unfortunately impossible to remove it safely from its display case, which

¹⁷ This hitherto unknown altarpiece has yet to be studied, as is its connection to the other two. However, its composition is clearly calqued from Eira Pedrinha, particularly the Saint George being led by the princess, and the spectators watching the scene atop a city's walls. The only noticeable difference between the two Saint Georges is that Eira Pedrinha's features a rondel protecting its elbow and a cross sculpted over the rerebrace, whereas Lemedé's specimen replaces both of these details with a small shield with the saint's cross. They are otherwise identical in every respect.

meant the examination had to be carried out *in situ* under sub-optimal conditions: the bascinet could be rotated on its stand but could not be examined from above, and interior examinations were impaired by the metal rod on which the bascinet is propped for display.

The bascinet has an approximate height of 33.5 cm, with a 25.5 cm diameter at its widest point. The facial opening is 12.3 cm wide at the brow, and circa 10 cm high between its widest points. It is, therefore, a rather small helmet for an adult. Armour created specifically for children and teenagers, though extremely costly and rare, was not unheard of in the Middle Ages,¹⁸ which makes it plausible that the helmet was perhaps meant for a teenager.¹⁹

We were unable to weigh it but, according to the *Pera Guerrejar* catalogue, the bascinet was assessed at 3211g in 2000 (Barroca *et alii*, 2000: 248); on-going flaking may have reduced this figure by a few grams. The skull plate is substantial: measurements taken at the edges of the facial opening, at the bottom edge of the neck and at the tip of the tail showed an average thickness between 2.5 and 3 mm. The remnants of the gorget plate are considerably thinner — 1.5 mm thick —, a reduction which would have been compensated by other defences worn over the neck and throat of the warrior (strips of mail attached to the bascinet itself, for example, or a mail collar or standard).



Figure 6. Front view of the bascinet, Museu Municipal de Pinhel, inv. no. 768. Photo by the authors.

3.2. Surface Condition

The bascinet shows heavily pitted and corroded surfaces, both internally and externally, and visible patches of granulation, flaking, and delamination — an indication of the mechanically-refined nature of the materials used in the piece (usually bloomery iron) (Williams, 2003: 24; Goll, 2013: 218), and an important element of proof of

¹⁸ One of the most famous examples of this phenomenon is the set of pieces presumably made for Charles VI of France when he was *dauphin* and later donated to Chartres Cathedral (see for example Kelly, 2013: 153-154). In Portugal, in 1373, when future Constable Nuno Álvares Pereira pledged himself to the service of Queen Leonor Teles at only 13 years old, the queen asked the Master of Avis, the future King João I, for his own harness from when he was that age, so that Nuno Álvares could be made a squire (Calado, 1991: 5).

¹⁹ One bascinet in the collection of the Metropolitan Museum of Art, New York (inv. no. 29.158.45), is reported to have very similar dimensions to the Pinhel bascinet. Since this bascinet was part of the Chalcis hoard of armour, meant to equip the fortress's standing garrison, it would be odd for it to be fitted to a teenager instead of an adult. Consequently, perhaps the Pinhel bascinet's dimensions are not so unsuited for a medieval adult as they would seem to our modern eyes. Regardless, and regarding teenagers in medieval warfare, see Woosnam-Savage, 2008: 89-93.

the helmet's authenticity (Goll, 2013: 339). This process of delamination, where layers of hammered iron come off in flakes or patches, is particularly severe on the left side of the bascinet, along the edge of the facial aperture.

As previously stated, the depositional properties of the Pinhel bascinet, its means of excavation and method of on-site preservation are all but unknown. Some or all of these factors will most likely have contributed to its current condition. Whether the helmet was first discovered amongst rubble or below strata of soil, removing an object from its original location will alter the object's environmental conditions, immediately and irredeemably affecting its preservation. Had the helmet not been removed without pre-excavation considerations and on-site preservation (Cronyn, 1990: 4-5), perhaps more of it would have been left for us to examine today. In any case, armour that has been excavated is most often in a state of deterioration due to the corrosive processes which take place in the soil and, although corrosion can hinder research on an individual piece, a uniform degree of corrosion also helps ensure that the object has not been tampered with. Such is the case here.

Unlike every other recorded great bascinet in existence, apart from the great bascinet in the Palazzo Ducale in Venice (inv. no. E1) (Baptiste, 2022: 72-734; Capwell, 2015: 89; Laking, 1920: 253-255), the Pinhel bascinet appears to have been shaped out of a single piece of material. There is an apparent forge-welded seam along the middle of the throat, which has become more noticeable due to the corrosive processes the metal has been subjected to throughout the centuries, but otherwise its exterior and interior surfaces are homogenous, with no discernible features — visible cracks or grooves, eroded edges — pointing towards the existence of riveted throat plates, for example, as is common with great bascinets of the period. However, given the bascinet's corrosion, it is as of yet impossible to confirm this with full certainty, or whether the seam is indeed the result of forge-welding as it appears or of blind riveting two edges of plate together. It is possible, though highly unlikely, that a throat plate might have been forge-welded to the skull, and that any marks of this process are presently hidden under a layer of corroded material. The presence of a single seam at the throat suggests that the bascinet was raised from a single piece of a metal which was then closed and welded or riveted at the neck, in a similar process to how medieval hoods were sewn. This process could have saved the armourer some time in shrinking back the throat of the helmet.

The bascinet does present some signs of damage and repairs. The upper left corner of the facial aperture in particular (Fig. 7) shows a sizeable patch of surface material missing. This patch can be explained by corrosion and delamination or by restoration with thinner pieces of material — lending some tenuous strength to the possibility that fragments of the visor were indeed used to restore the skull. The bascinet's inner surface also shows smooth, clay-like patches of material, further pointing to modern restorations or consolidations.



Figure 7. Detail of the damaged section, Museu Municipal de Pinhel, inv. no. 768. Photo by the authors.

There is a fairly large hole (circa 9 mm wide) next to this damaged section. This might have simply been a part of the damaged section which for some reason was not consolidated during modern interventions. Another, though unlikely explanation for the hole is battle damage — indeed, the unknown plate fragment displayed next to the bascinet²⁰ also shows a diamond-shaped hole, *ca.* 6 × 4 mm, reminiscent of the profile of a byker, incorrectly known as bodkin (Moffat, 2024: 185-6), arrowhead (Fig. 8).

²⁰ See footnote 3.



Figure 8. Detail of the byker-like perforation on the plate fragment. Photo by the authors.

3.3. Morphology of the Skull

Form-wise, this piece shows some unusual features. Its medial ridge begins at the upper edge of the face opening and ends at two liner holes at the back of the neck. Unlike most of its contemporaries, the Pinhel bascinet does not have a very distinct peaked apex. Though conspicuous, the apex is smooth and rounded, and it includes no holes or apertures for fitting a crest, plumage, or some other form of ornamentation, which every type of late medieval helmet could potentially feature (Breiding, 2013), including bascinets and great bascinets (Baptiste, 2022: 75).



Figure 9. Side view (right side) of the bascinet, Museu Municipal de Pinhel, inv. no. 768. Photo by the authors.

The rear end or tail of the helmet is an almost flat section which extends down the nape of the neck, and it would have overlapped with the top of whatever torso protection would have been worn with it. It was not infrequent for bascinets, and later great bascinets too, to be fastened to a backplate by a buckled strap, to keep the helmet in place when on horseback or when struck by an opponent (Baptiste, 2022: 44). This buckle would have been fastened to the tail of the helmet by a pair of rivets, which are not present on the Pinhel bascinet, nor are their corresponding holes. Though the bottom edge of the bascinet is severely corroded, meaning that these rivets or their placement holes could have been lost, the tail's symmetry and overall clean shape make this seem unlikely. There are also no strap rivets or holes along the bascinet's front edge. Based on this, it is reasonably safe to assume that this bascinet was simply put on one's head before heading into combat, independently of any other pieces.



Figure 10. Rear view of the bascinet, Museu Municipal de Pinhel, inv. no. 768. Photo by the authors.

The face opening is an elongated semicircle, the top edge of which would have sat just above eye-level and the bottom at roughly mouth level. Unlike later great bascinets, this narrow face opening allowed only for the middle of the face to show through, completely safeguarding the chin and cheeks.

3.4. Gorget Plate and Rivets

The bascinet's throat curves anticlastically from the bottom of the face opening to the front bottom edge, meaning that it wraps around the throat horizontally whilst maintain a keel-like shape along its vertical axis. The now-lost visor would have sat snugly against the throat of the bascinet when closed. However, to close the gap between helmet and breastplate and provide additional protection to the throat, there are vestiges of a gorget plate either side of the bascinet's throat. The biggest of these remnants is a quasi-square section of plate on

the right side (Fig. 11), 1.5 mm thick, still attached to the skull plate by a large round rivet located on its upper corner. These rivets would make it so that the gorget plate could articulate when bending the head downwards. There is a rivet on the other side of the bascinet, too, though on this side no vestiges of the gorget plate remain, except for a protuberance which might be a small section of plate compressed against the bascinet's skull.

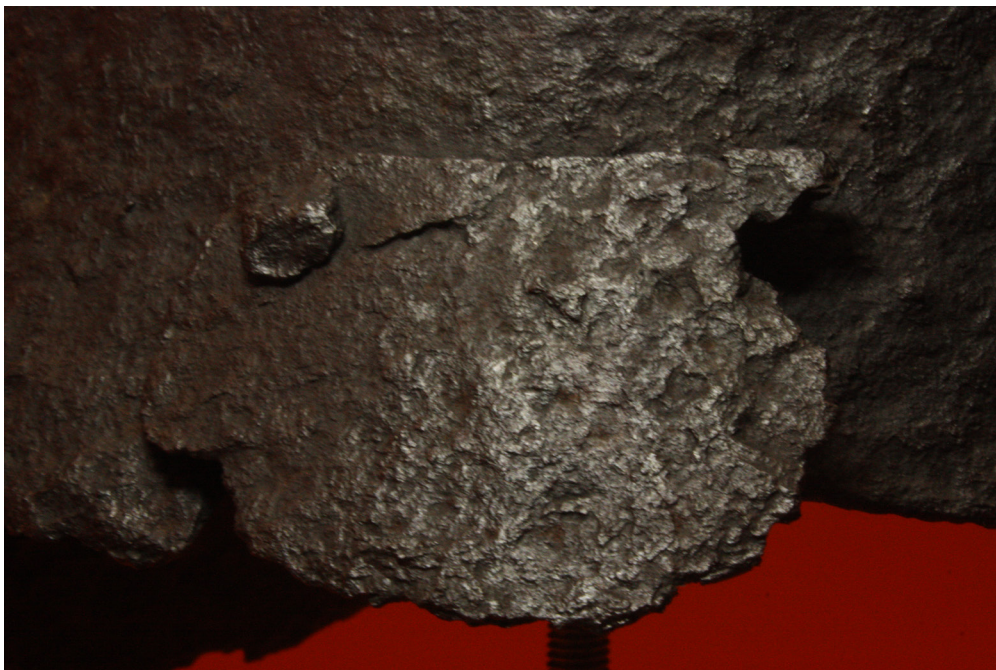


Figure 11. Detail of the remains of the throat plate on the right side of the bascinet, Museu Municipal de Pinhel, inv. no. 768. Photo by the authors.

The bottom edge of the bascinet has multiple elements of interest. The most salient of these is the absence of a large strip of metal under what would have been the gorget plate, creating two indentions, or 'steps', at either end (Fig. 12). This recess in the plate could have been created to do away with excess material, thereby keeping the weight of the bascinet as low as possible. The removal of excess or superfluous material under overlapping plates was common practice for the period, at least in other pieces of armour — particularly noticeable in surviving breastplates, backplates, and leg harnesses, which have larger, overlapping sections out of which material can be safely removed without compromising function.



Figure 12. Detail of the indentation on the left side of the bascinet. Museu Municipal de Pinhel, inv. no. 768. Photo by the authors.

Another interesting detail is the presence of small rivets all along the very edge of the helmet, but only, and intriguingly, at the front. The few rivets that are still visible are heavily corroded, to the point where some of which seem to have almost merged with the skull plate. Trying to find traces of additional rivets from the inside of the helmet proved futile, due to the level of corrosion. The presence of these rivets can be interpreted in a few different ways. Firstly, rivets along an edge usually indicate the presence of a liner set on the inside of the helmet. However, the rivets are only present on the front half of the helmet, which seems to rule out this possibility, since a liner would need to be secured around the entire base of the helmet. The second option is the attachment of a mail fringe, as mentioned above. This fringe would have been connected to the base of the helmet by these rivets (with or without a strip of leather). This piece of mail would have blocked any weapon that might have slid upwards between the breastplate and the gorget plate. A third and final possibility is that the rivets were meant to prevent the gorget plate from being raised too far. In some instances, the upper edge of the gorget plate could swing above the bottom edge of the helmet, thus creating a gap which an opponent could take advantage of. In order to keep gorget plates from ‘popping’ open, rivets could be added to create added resistance and prevent the plate from sliding too far beyond its proper position. Since these rivets would have been located squarely beneath the now missing gorget plate, this third possibility seems unlikely, particularly given the width of the gorget plate and how the bottom rim of the visor likely fitted underneath it. The second option, therefore, figures most likely.

3.5. Pivot and Rivet Holes

Either side of the skull, at the widest points along its circumference, there are two large, well-formed holes (right hole: 4.75 mm in diameter; left hole: 6 mm in diameter) that would have accommodated pivot rivets for a visor hinge plate. Both the visor’s hinge plates and pivot rivets are now entirely missing.

There are also six pairs of smaller holes around the skull, between 3 and 3.5 mm in diameter, spaced about 2.7 cm apart, arranged in a line that would correspond to the top of a wearer’s skull and back of the head. In other specimens, these would likely have held a leather strip in place, to which the helmet’s padded liner would have been sewn. This padding would have absorbed the impact of a blow to the head, as well as make the bascinet comfortable for use. Not a single one of these holes features any trace of a corresponding rivet, however, which either means that these corroded away in the soil, were removed at some point during or after the helmet’s working life, or that they were never present to begin with, in which case the helmet’s liner would have been attached to the bascinet by a series of ties or points. This may hint at one of the bascinet’s intended uses, as we shall see below.

4. DATING & POSSIBLE RECONSTRUCTION HYPOTHESIS

Pieces of armour such as this one can come from a number of places before they end up on public display: castles, churches, archaeological excavations, war loot, private collections, sales, or bequests. Armour that has been excavated, as is the case with this bascinet, is most often in an advanced state of deterioration due to the corrosive processes it has been subjected to in the soil. As stated previously, although corrosion can hinder research, it can at least help prove an object’s authenticity, and whether or not it has been tampered with. A piece’s archaeological context also helps by providing a *terminus ante quem* which can then be refined by looking at associated artefacts or historic or archaeological events.

The lack of any official records and stratigraphic data is a serious setback in assessing the bascinet’s age. The fact that it was found amongst debris from a late medieval castle, however, is a good indication of its authenticity, as is its condition and shape, as the history of the castle and of the town could provide a lead in establishing a chronology for the helmet and a reason for its presence. Unfortunately, this too is somewhat of a dead end. There are no records of any bascinets specifically associated with the castle, or any deposition of arms and armour which could have included one. Pinhel’s close proximity to the Portuguese border saw it take active part in the 1383-1385 Crisis (Gomes, 2001: 143) between João I of Portugal and Juan I of Castile and his wife, Queen Beatriz.²¹ However, the conflict occurred too early for this type of bascinet to be directly associated with it. The only other noteworthy event in Pinhel during the Middle Ages which might have resulted in the bascinet’s deposition, disposal or loss was the 1481 conflict which opposed D. Fernando Coutinho, Marshall of Portugal, and the people of Pinhel and its neighbouring villages. During the conflict, which has been studied in depth by Humberto Baquero Moreno (Moreno, 1985: 172-211), the people of Pinhel, armed “de

²¹ On the conflict, see, amongst others: Russel, 1955; Monteiro, 2003; Gomes, 2014; Adão da Fonseca *et alii*, 2020.

gibanetes, cascos, capacetes, londes, bestas, espadas e lamcas, e outros espingardas e com espingardeiros”²² (Moreno, 1985: 197) assaulted the town’s outer walls. The assailants took “tres torres da uilla, os mais principais. E hũa dellas estaua o armazém e armaria nossa.”²³ The towers’ doors were smashed open, and the men “tomaram daquelas armas as que quizeram,”²⁴ turning them against the castle itself in their effort to dislodge Coutinho’s men (Moreno, 1985: 197). Could the bascinet have been one of the weapons taken during this raid on the royal arsenal, along with other pieces of equipment?²⁵ Perhaps, but the source is mum about what exactly was taken, leaving us only with the certainty that the only late medieval conflicts in which Pinhel was involved are either too early for this type of helmet, or much too late.

The only way to appraise the helmet’s age is therefore to compare it with other similar finds, as well as with any iconographic depictions of analogous pieces. In spite of its heavily excavated condition, the bascinet’s skull is intact, leaving little to no doubt as to what it would have looked like when it was first in use. As stated above, great bascinets rapidly lost their pointed profiles during the first decades of the 15th century and gained more rounded shapes, resulting in the exaggerated globose shapes of the middle of the century onwards. Extant artefacts, such as the great bascinets in the Musée de l’Armée in Paris (inv. no. G. PO. 637, from ca. 1400), the Musée de Beaux-Arts de Dijon, said to have belonged to Jean de Salins de Vincelles (inv. no. CA 1472-1; 1472-1 (Cat. 1883), ca. 1400-1410), the British Museum, London (inv. no. OA. 2190, ca. 1430), the Royal Armouries from Leeds (inv. no. IV.3, ca. 1430-40), or the Museo de Navarra, Navarra (no inv. no., ca. 1430),²⁶ show how the skull lost some of its dimensions, as does contemporary art in the Iberian Peninsula and elsewhere (Fig. 13 and 14, respectively). The Saint George from Marecos (Fig. 5), practically sans apex and tight against the back of the head, is a good illustration of the final stages of this development. Therefore, and in our opinion, the subtle shaping of the Pinhel skull, with its lack of a defined apex, would place it at the tail-end of this process, between circa 1425-1450.



Figure 13. Detail from the Castigos del rey don Sancho (Madrid, Biblioteca Nacional de España, Mss/3995), from ca. 1420-1430, fol. 39r. © Biblioteca Nacional de España (with our thanks).

²² “With brigandines, *cascos*, *capacetes*, gambesons [?], crossbows, swords and spears, and others [with] handguns and handgunners” [our translation]. There is some difficulty in translating this small passage due to the polysemic nature of the word *casco*, which can mean any sort of open type of helmet (cervellieres, war hats, Iberian *capacetes*); of the word *capacete*, which itself can refer to the Iberian *capacete* or war hats in general; and of the word ‘londes’, which hints at a misspelling of the word ‘loudéis’ (gambesons).

²³ “Three of the town’s towers, the largest ones. And [in] one of them was our storehouse and armoury” [our translation].

²⁴ “Took of those weapons whichever ones they wanted” [our translation].

²⁵ Including the arm harness we have identified in note 3.

²⁶ This bascinet, attributed to armourer Pedro del Campo, was supposedly made for Carlos, prince of Viana (29 May 1421 – 23 September 1461), eldest son of King Joan II of Aragon and Queen Blanca I of Navarre. See Riquer, 2011: 319-320; images 192-193.



Figure 14. Detail from a Missal (Montpellier, Bibliothèque Universitaire de Médecine, BUM H 071), ca. 1430, fol. 015r.
© Institut de recherche et d'histoire des textes / Bibliothèque virtuelle des manuscrits médiévaux (with our thanks).

This timeframe also helps us considerably in reconstructing what its visor might have looked like. In addition to the skull, the presence of a separate, pivoting throat plate against which the visor would have come to rest, as well as of holes for pivot hinges, exclude some more uncommon configurations of great bascinet, such as the visorless specimens with rondels seen in early 15th century art (one bascinet in folio 24r of the *Siege of Troy* manuscript, Rylands MS English 1, housed in the University of Manchester), or the slim triangular visors associated with the so-called 'Venetian' bascinets (such as a visored bascinet from Chalcis, inv. no. 29.158.46 at the Metropolitan Museum of Art, New York, from ca. 1425-1450), examples of which have been found in Aragon, in the castles of Rocabrúna, Llinars del Vallès, and Llívia (Vondra, 2021: 77, fig. 42; Barrachina and Monreal, 1983: figs. 146 and 147).

Some great bascinets were still fitted with beak-like, or *rostriform*, visors, as was common with late 14th century bascinets in general. The Palazzo Ducale bascinet, as well as the great bascinet found in 2019 in Monreal de Ariza, Spain,²⁷ are good instances of this. It is not impossible that the Pinhel bascinet was fitted with one of these visors (Fig. 15), albeit this configuration seems to have been unusual during the second quarter of the century.

Another possibility, shown rarely enough in contemporary art, is represented by at least a pair of extant specimens. The most well-known of the two is the CH S19 helmet from the Churburg collection, from ca. 1440-1450: an otherwise typical great bascinet with a long keel-shaped visor, featuring the salient lip and wide but narrow eye slit of the so-called 'frogmouth helmets', in a clear attempt to combine the best features of both types of helmet. It is unclear whether this particular great bascinet was intended for war, tournaments, or both. The other example — (Fig. 16), dated to ca. 1420-1430, originally from the Duc de Dino collection and currently housed at the Metropolitan Museum of Art, New York (inv. no. 04.3.237), may have been initially built much like the Churburg helmet, but was converted to tournament use later in its working life (Baptiste, 2016: 63). This was achieved by replacing the bevor plate with a tall front plate which covered most of the wearer's face, and cutting away the bottom half of the visor to ensure a proper fit on top of the front plate and eschew as much weight as possible. In both these cases, the overall physiognomy of the bascinet is similar to

²⁷ This helm is currently undergoing restoration and is yet to be formally studied and published. A news item on the discovery can be found at Rus, Ó. "El taller de «chapa y pintura» del tesoro cultural de España". *ABC*, September 2, 2019. Available at: https://www.abc.es/cultura/arte/abci-taller-chapa-y-pintura-tesoro-cultural-espana-201909020052_noticia.html?ref=https%3A%2F%2Fwww.abc.es%2Fcultura%2Farte%2Fabi-taller-chapa-y-pintura-tesoro-cultural-espana-201909020052_noticia.html

Pinhel's. As such, a reconstructive hypothesis featuring a keel-shaped visor (Fig. 17) is admissible — though such visors are essentially unknown in the Peninsula, as far as the authors are aware, and a keel-shaped visor for the Pinhel specimen would have to be so long to fit with the bascinet's profile as to make this design choice almost impractical.

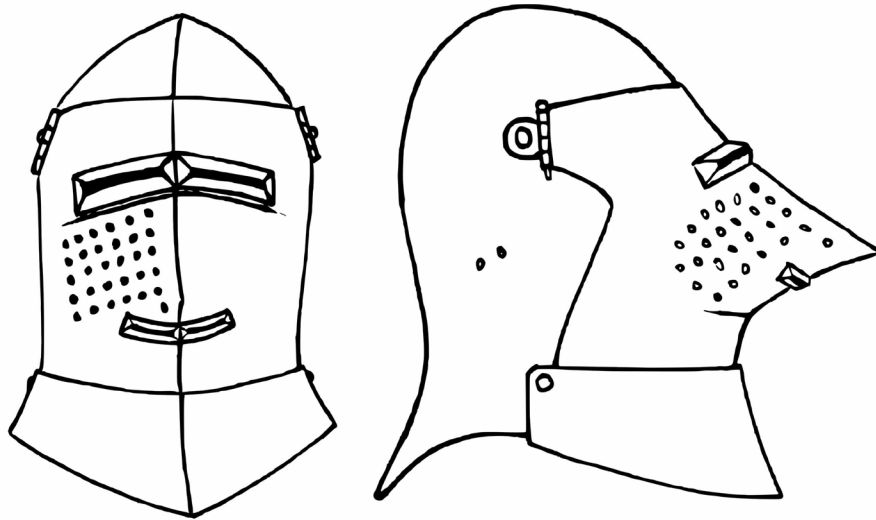


Figure 15. Reconstruction hypothesis 1: The Pinhel bascinet with a rostriform visor.



Figure 16. Tournament helmet with keel-shaped visor. © Metropolitan Museum of Art, New York (with our thanks).

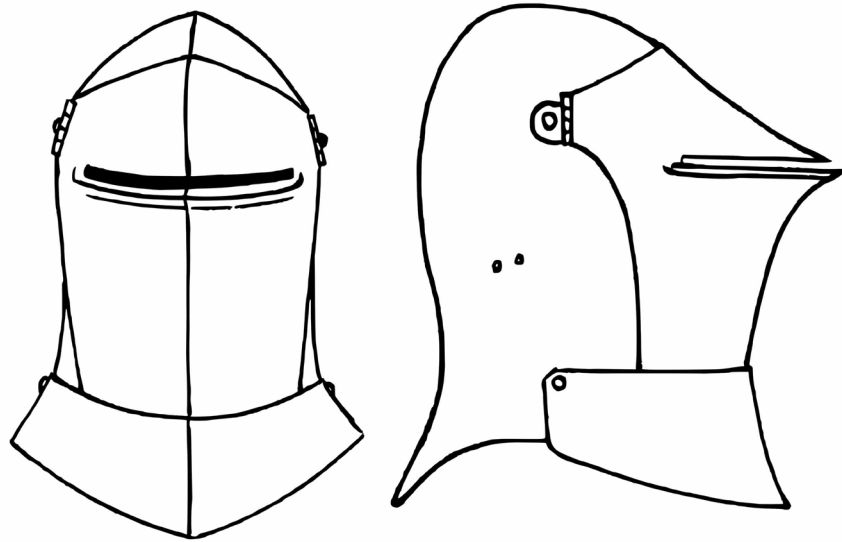


Figure 17. Reconstruction hypothesis 2: The Pinhel bascinet featuring a keel-shaped visor.

However, the majority of extant bascinets and period depictions (such as Fig. 13, or as the exquisite Saint George from the Museu Nacional d'Art de Catalunya in Barcelona, inv. no. 214513-000) show newer styles of visor, rounded and smoother — not unlike a dog's snout or muzzle —, to better allow blows to glance off the wearer's head²⁸. As with (most of) its predecessors, this style of visor was perforated with series of ventilation holes across both sides of the face and all around the *ocularia* for easier breathing. The added space for ventilation, in comparison with the tighter confines of the beak-like visors of the late 14th century or the keel-shaped visors from Churburg and the de Dino examples, could compensate for the narrowness of the face opening of the Pinhel specimen. On the basis of probability alone, then, the Pinhel bascinet was likely fitted with one of these, which allows us to present Fig. 18 below as the best hypothesis for what it might have looked like when new — which might have been a very different configuration of visor than the one it had (if it had one at all) when it was discarded or deposited in the ground.

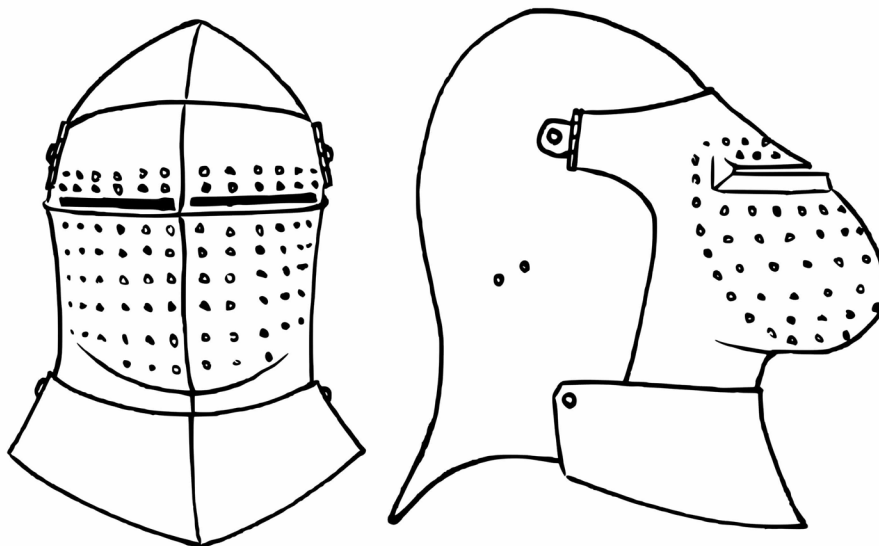


Figure 18. Reconstruction hypothesis 3: The Pinhel bascinet featuring a snout-like visor.

²⁸ This configuration is evocative of earlier styles of visor, worn particularly in Central Europe (nowadays Germany, Austria and Poland) and Italy. See Strong, 2018: 99-100, 105, 137-143.

5. CONCLUDING REMARKS

At first glance, and according to our analysis, the Pinhel bascinet — or, what remains of it — may appear as a rather unassuming example of a great bascinet from the second quarter of the 15th century. Nonetheless, some important questions remain. The bascinet's rather small size, for example, as well as peculiar distribution of liner holes are unlike those of any other bascinet known to the authors. The liner holes themselves are particularly puzzling. As noted above, their clean appearance suggests that they were never occupied by rivets, thereby pointing to the use of points to tie a liner in place. Thick liners, separate from the helmet, are indelibly linked with equipment optimised for martial displays and sports — parades, tournaments or military games such as the joust or the *mêlée* (Barber and Barker, 1989; Monteiro, 1994) — their increased thickness meant to absorb the added shock of a lance blow to the head (Schönauer, 2022: 180). Given its size, the Pinhel bascinet would not have allowed for much padding, which seems to run counter to the notion of a separate liner. Additionally, the bascinet features no holes for a crest, which lends more supports to the idea that this helmet was intended for war more than martial displays, in which individuals usually needed to be recognised clearly (Barber and Barker, 1989: 152, 161; Breiding, 2013; Riquer, 2011: 311-313).

It also remains to be confirmed whether the bascinet's skull is indeed made out of a single shaped plate of metal — and thus the only such great bascinet in the world, along with the Palazzo Ducale bascinet —, or whether corrosion has masked the seams of any forge-welded plates. Unfortunately, the bascinet is in too fragile a state to be removed from its case and submitted to any kind of analysis, such as a CT scan or simple radiography, which may provide further clues on the matter.

Finally, a minute sample of surface metal, measuring approximately 9×8 mm, was recovered from amongst the many such smaller fragments which had flaked off by themselves from the bascinet onto the surface of the display case. We hoped to submit this fragment to an array of tests for material analysis, including SEM-EDS spectrophotometric determination / Raman spectroscopy and XRF, and publish the results as an appendix to this paper, but that has not been possible thus far. We shall endeavour to do so at the earliest possible opportunity, and publish the results independently.

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António Conduto Oliveira: conceptualization, formal analysis, funding acquisition, investigation, methodology, project administration, writing – original draft, writing – review & editing.

Peter Alan Kalkman: conceptualization, formal analysis, investigation, methodology, writing – original draft, writing – review & editing.

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