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A Close-Up Look of Hishām's Casket

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Resumen

El artículo describe en detalle la arqueta andalusí que se conserva en la Catedral de Girona y documenta su presencia en lo alto del retablo del altar mayor ya en 1511. Trata de cada uno de los diversos componentes de esta pieza única de platería califal, muestra de lo que se consideraba un objeto de lujo en el año 975. Comenta su forma y medidas, el alma de madera, las chapas de plata que la recubren y los herrajes complementarios. Describe los motivos usados en su decoración y las técnicas empleadas (repujado, dorado y nielado). Se exponen aquí por primera vez el solero de plata cincelada, la decoración oculta por el cierre y el interior de la caja, hoy vacía, forrado de seda roja.

Palabras clave: Platería califal, s. X, al-Ḥakam II, arqueta de Hišām, Gerona

Abstract

The present article studies the Andalusian casket that has been kept in the Cathedral of Girona since at least 1511. This is the only surviving example of an object made in precious metal for an Andalusi caliph. It was commissioned by al-Ḥakam II as a gift for his son Hishām, the heir to the caliphate, and can be dated to 976 or a little earlier. This essay describes its shape, offers its measures and comments in detail the different components of this unique piece of silverware: the wooden box, the gilded silver plates that cover it, and the other pieces of metalwork (handle, metal mounts, clasp). It deals with the motifs and the techniques (embossing, gilding, and niello) used in its decoration. The chiseled silver bottom of the casket, the chiseled decoration hidden under the locking mechanism and the inside of the box, which today is empty and lined with red silk fabric, are shown here for the first time.

Key Words: Silverware, Caliphate, 10th c., al-Ḥakam II, Gerona casket

The Museum of the Cathedral of Girona holds a casket, a piece of Andalusian silversmithing of which we know with certainty that it came out of the Umayyad Caliphate workshops, and we know the place (Cordoba) and the approximate date of manufacture (974 - 976). It is also very well preserved; this means that each and every one of its details, even the smallest, are testimonies of exceptional value on the craftsmanship and aesthetic concepts at a historical moment. The casket provides a precise date to each of its elements, while showing what were the features of a luxury product of the highest quality, as it was a gift from the caliph al-Ḥakam II to his son, the future caliph Hišām II (fig. 1).

Despite its importance, the descriptions given in art history articles and catalogues of the exhibitions in which it has been shown are very generic and short, including also errors and anachronistic value judgements. Itis easy to find images of the closed chest, from the front or in a slight foreshortened view, which do not allow to appreciate the decorative motifs or many other details: the interior, which has never been shown, the handle, the four sides of the epigrapghic band or the decoration of the base, which to date has never been mentioned. This study aims to describe its constituent parts and provide data that will serve as a basis for future studies.[1]

In a previous article you will find some of the issues and questions raised by this object. One of them is since when it has been in Girona and, more specifically, when it was placed at the top of the high altar of the Cathedral, the place where it was before being transferred to the Cathedral's Museum. I already mentioned there the need to search the archives to try to find out more information about its whereabouts, as the first published record of its presence dates from the early 19th century. (Labarta 2015: 2-7).

Jaime Marqués' study of the missing gold frontal of the high altar transcribes in an appendix the detailed description made in the inventory drawn up during the visit made to the Cathedral of Girona by Bishop Guillermo Boïl in December 1511. The transcription ends with the sentence: "The description of the altarpiece follows" (Marqués 1959: 231). Contrary to Pla's assertion that "the corbels were put in place shortly after 1579" (Pla 1943: 152, nota), a look at the following pages of the inventory has given me the pleasant surprise of finding that in 1511 the shelves were already in place on both sides of the altarpiece, and on them the casket and its ivory companion.

[1] My gratitude goes to Dr. Antonio Vallejo, former director of the site of Madinat al-Zahra (Córdoba) to whom I owe the first photos and information on the interior and the floor of the casket, and on the existence of analyses of the materials; to Dr. Màrius Vendrell, professor at the University of Barcelona, for providing me with the unpublished report by the team Patrimoni-UB and the excellent photographs with which I began this description; to the silversmith Fernando Marmolejo, author of the copy of the casket exhibited in the Museum of Madinat al-Zahra and of another preserved in the Cathedral of Girona, who advised me on the embossing, niello and gilding of the silver; to Dr. Ernestina Badal, professor at the University of Valencia, a specialist in archaeobotany, for her observations on the wood; to the Chapter of the Cathedral of Girona for giving me access to the casket, and especially to Joan Piña, Curator of the Treasury of the Cathedral of Girona, and Gustavo Torres, logistics technician at the Cathedral of Girona, who ensured that I was able to study it, take measurements and photograph it.

Thus, this inventory documents its presence on the altar of the Cathedral of Girona three hundred years earlier:

> Item. In superiori parte dicti retrotabuli sunt duo postes exuntes extra dictum retrotabulum et sunt cohoperte ex laminibus argenteis et cum ymaginibus latronum super quos postes sunt duo thece quarum una est eburnea et alia cohoperta laminibus argenteis.[2]

I. General Appearance of the Casket. Shape and Dimensions

It is a wooden casket with a lid, covered on all its outer sides with embossed silver plates. The box is a rectangular prism consisting of a base and four rectangles. The lid is made up of four very narrow rectangles, which form a plinth that extends the prism of the box, and a pyramid-shaped trunk made of four trapezoids and covered by a rectangle.

Each of these pieces has a decorated outer surface, which poses its own problem of decorative composition. Two fittings at the back join and articulate the lid to the box, and a third closes it at the front. The rectangles and trapezoids at the front and back are cut differently, making them different; only the lateral faces are symmetrical.

The base of the box is 380 mm long x 230 mm wide. Its total height is 250 mm: 130 mm for the box; 120 mm for the lid. The oblique edges of the lid are 115 mm. The top plane of the lid is 268-270 mm long x 100 mm wide.

These measurements should be one of the easiest data to obtain. However, a cursory review of the publications reveals discrepancies in the quantities. We find fluctuations due to rounding or the point at which the measurements were taken, but misprints are also common:

38 x 23 x 25 (13+12) cm (Girbal 1877: 331; 1886: 162; 1890: 242; Davillier 1879: 17 n.1)
39 x 23 x 27 (14+13) cm (Vives 1893: 99; Ríos 1892: 510; Madrid 1893 nº 85; Ríos 1915: 186)
39 x 23 cm (Gómez Moreno 1951: 337)
40 x 23 x 25 cm (Font 1952: XVIII; Joyas 1954: 14)
20 (*sic*) x 23 x 25 cm (Marquès 1971: 17)
38 x 23,80 x 24,50 cm (Ylla-Català 1988:155)
23 (*sic*) x 23,80 x 24,50 cm (Ylla-Català 1989: 106)
38,5 x 23,5 x 27 (Al-Andalus 1992: 208; Jenkins 1994: 94; Islam i Catalunya, 1998: 58).

[2] Arxiu Diocesà de Girona, P-31, 1511-1512, f. 6r. Many thanks to Joan Villar, from the Arxiu Capitular de Girona, who provided me with a copy of this document.
"Item. En la parte superior de dicho retablo hay dos estantes que sobresalen de dicho retablo y están cubiertos de láminas de plata con las imágenes de los ladrones; sobre dichos estantes hay dos cajas, una de las cuales es de marfil y la otra está cubierta de láminas de plata" (translation by the author). [*Item. On the upper part of the said altarpiece there are two shelves protruding from the said altarpiece and covered with silver plates with the images of the thieves; on the said shelves there are two boxes, one of which is made of ivory and the other is covered with silver plates.*]

Only Girbal gives the measurements of the top of the lid, 27 cm long x 10 cm wide (Girbal 1877: 331). In the reprint of the article, they are listed as «0 m, 27 x 6 m,10 (*sic*)» (Girbal 1886: 162) and the same mistake is in its Catalan version (Girbal 1890: 242).

The casket is large in size compared to other preserved boxes from the 10th-11th centuries. Its shape and measurements are almost the same as those of the Pamplona ivory chest (dated 1005), measuring 384 mm at the front x 237 mm at the side x 236 mm in height. Other ivory caskets are also close in size, such as the one from Palencia (preserved in the Museo Arqueológico Nacional [MAN] 57371, dated 1049), with a 345 mm long x 230 mm wide x 225 mm high and the one in the Museum of Burgos from the Monastery of Santo Domingo de Silos, which is 345 mm long x 200 mm wide and 190 mm high. Slightly smaller are the one from Zamora (MAN 51944; 312 mm x 205 and 300 mm high) and the one called the casket of Martin of Aragon (MAN 51944; 312 mm x 205 and 300 mm high). (Gabinete de Antigüedades of the Real Academia de la Historia NI 737; 312 x 227 x 206 mm).

There are other caskets with the same characteristics whose dimensions are, however, half those of the previous ones. Among them, I would like to mention the Agate Casket at the Basilica of San Isidoro, León (MAN 51053; 11th century, previous to 1063), a piece with which the Girona casket has many similarities and which has served as a useful comparison, so I will refer to it throughout this article.[3] It is 187 mm long x 128 mm wide and has a maximum height of 175 mm; of similar size is the casket of the hounds (*lebreles*), also located in San Isidoro (MAN 51015): it is 185 mm x 125 mm x 170 mm. Its measurements are almost half those of the Girona casket, although they maintain the same proportion, which is based on the golden ratio (larger side + smaller side is to larger side as larger side is to smaller side: φ).

II. A Soul of Wood (fig. 2)

It is usual for medieval caskets and boxes to have been built by assembling wooden boards. Exceptions are the Oviedo agate casket and the San Genadio casket in the Cathedral of Astorga, made from two solid pieces, casket and lid, cut and carved on the outside and hollowed out on the inside (García de Castro 2014: 184; Alonso 2008: 360).

How the Girona box is constructed, how the pieces are cut (at right angles or mitred), assembled (juxtaposed, joined with dove-tail joints or with other types of crimping) and joined together (glued, nailed or by means of dowels, pegs or wooden strands) would be interesting evidence of the carpentry of the Caliphate period, of which we know little or nothing. Unfortunately, the outer lining of silver sheeting and the cloth covering the interior almost obscure the wooden core of the chest, which can only be seen at the mouth and through breaks in the sheets of the base and one side of the chest.

[3] All references to this casket are based on the photos by Patricia Elena Suárez that are included in the file of the MAN that can be found on https://ceres.mcu.es.

Despite this, it can be seen that the box is made of 10 - 11 mm thick boards and it can be seen that they are cut at right angles. The two that form the fronts have a length equal to the length of the front and back of the box (380 mm); the length of the boards forming the smaller sides (210 mm) is the length of the side face minus the thickness of the two long boards. The construction of the plinth of the lid follows the same structure.

It is not possible to see how the boards were joined together. The right side has lost the lower part of the silver lining and there are some grooves or vertical cuts in the wood, although I am not sure how the side was joined to the base. It could have one or more notches, as can be seen in the agate casket of Leon on the side that has lost the lining.

The openings of the box and lid are carved to fit together: on the lid, the outer half of the board has been left at its full length and the inner half has been lowered by 7 mm; on the box, the outer half of the board has been lowered by 7 mm, while the inner half has been left at its normal length; the box closes well, but not hermetically. The casket of Leon has the same recesses in the mouth. The other caskets are normally shown closed in photographs, and therefore we are unable to verify this.

Type of Wood

Which tree is the wood from? Opinions are mixed:

> La materia de la caja o mejor el ánima della es, al parecer, de madera de ciprés, que tiene, como es sabido, la propiedad de no criar carcoma, por cuya razón, junto con el aloe, el alerce y el sándalo, fueron siempre preferidas para semejantes muebles, por conceptuarse incorruptibles (Girbal 1877: 332 = 1886: 162). [*The body of the casket, or rather its soul, is apparently made of cypress wood, which is known to be resistant to woodworm, for which reason, together with aloe, larch and sandalwood, it has always been preferred for such furniture, as it is considered non-decaying*.]

There are those who agree with Girbal and say that the soul is made of «cypress wood» (Islam i Catalunya, 1998: 58); but other authors suggest that is «a box of non-decaying wood, possibly larch or cedar» (Williams 1908, I: 46-47), or that «the casket is made of teak wood» (Roura 1988: 43).

The analysis carried out at the University of Barcelona [UB] on a small splinter of wood extracted from inside the casket of Girona did not give conclusive results. The report suggests that it could perhaps be «wood from the *Pinaceae*, possibly from the genus *Picea* (European spruce, highly prized for making musical instruments) or from *Larix* (Larch) qwhich does not rot and is highly prized for delicate woodwork» (Vendrell, Giráldez, Boularand 2007: 9). Dr. Màrius Vendrell has been kind enough to provide me with four photographs taken with a microscope of this

sample of wood; when consulted about them, Dr. Ernestina Badal mentioned that they do not in any way allow to determine which tree the wood is from.

García de Castro points out that the Agate Casket from Oviedo was made from cypress wood, a species that does not exist in the Cantabrian biocenosis, while the Cross of the Angels has a cherry wood core and the Cruz de la Victoria has an oak core, both local species. «It is a wood which, due to its resin content, is very resistant to humidity and to xylophagous: in short, it is a guarantee for the construction of a safe container», and he takes up what Girbal said (Girbal 1877: 332) about the virtues of the cypress wood with which he believed the Hishām's casket could be made (García de Castro 2014: 210). He has had access to the UB report on the Girona chest, and therefore wonders how the wood from the trees suggested there could have reached Cordoba, because

> both species, typical of northern Europe and the Alps, are very distant from al-Andalus. As there can be no doubt that the piece was made in al-Andalus, as attested by the inscription, the question remains open as to how and in what context the box or its components arrived in Córdoba to be decorated there. (García de Castro 2014: 210, n. 107).

Presumably, the best quality wood was used for the chest, either local or imported, and in the latter case, it may have come from the Moroccan Atlas. It cannot be ruled out that the wood was obtained from the Iberian Peninsula, as the brutal deforestation that it has suffered in later centuries may have caused the disappearance of species that did exist in the 10th century. Unfortunately, the Arab geographers who speak of the mountains of Sierra Nevada mention the fruit trees and aromatic herbs that grew at its foot, but say nothing about the type of trees that are of interest to us (Torres 1967-8). Andalusian agronomic texts mention various types of pine trees, but do not mention the use of any of them in carpentry (Carabaza et al. 1998).

al-Idrīsī notes the presence in the Tortosa area of insect-resistant pinaceae; the pine and boxwoods that grow there are also mentioned in the geographical treaties of Ibn Gālib (Bramon 2000: 123).

al-Idrīsī mentions that, in Tortosa

> great ships are built from the wood of its mountains, for in its mountains there are pine trees that are unequalled in length and thickness. They are used to make the masts and yards of ships; the wood of the pines of this city is red, with shiny bark, resinous, does not decay quickly and it's more resistant to insects than others; it enjoys a great reputation for its quality. (Idrīsī: 190).

The edition of his chapter on the fifth climate adds a few more details:

> In the mountains of Tortosa grow pines of such excellent quality as there is nowhere else in the world, both for their length and their thickness and the beauty of their grain; they are taken to all parts of the world, both near and far, and their wood is used to make coffered ceilings for royal buildings and chests (jazā'in); they are used for the frames and masts of large ships, and are used to build military devices, such as siege towers, corvus, scales and others (Saavedra 1881: ár. 69; trad. 82).

As is well known, the 12th century author also attests to the presence of this precious wood in Cordoba when, in describing in detail the ceilings, beams and coffered ceilings of his aljama mosque, he specifies that "the wood of the whole mosque is of pine from Tortosa" (Idrīsī: 209).

Further discussion of the wood of which this chest is made and its provenance will have to be put on hold until further analysis is done.

III. The Silver Plates

The silver plates covering the wooden core were almost certainly obtained by beating the metal from ingots. There are three types:

- the undecorated plate covering the rims, almost vanished now (0.2 mm thick)
- the chiselled plate covering the outside of the base (0.2 - 0.3 mm thick).
- the embossed plate covering the visible parts of the chest (0.5 - 0.6 mm thick).

1. The coating of the rims (fig. 3)

In the agate casket from León, besides the plates that cover the exterior and the base, there are wide strips of silver plate that cover, in the lid and casket, a small part of the exterior below the decorated plates, the rim and a small part of the interior, where they are nailed.

The opening of the Girona casket features some small nails, some of which preserve the remains of silver leaf around them; this leads us to think that here too there was a lining in the lid and box that covered the opening. Its disappearance is not visible when the box is closed, so it must have been torn off and removed at an undetermined time. The analysis of one of these remains yielded an Ag alloy containing 10 % Pb (Vendrell, Giráldez, Boularand 2007: 4-5).

2. The Base (fig. 4)

The base of the casket is covered on the outside with a 0.2 - 0.3 mm thick silver plate. According to the analysis carried out on a sample, its alloy contains 90% Ag and 10% Cu (Vendrell, Giráldez, Boularand 2007: 3).

The surface has been divided into 12 x 7 rows of squares of 29 mm per side, separated by 2.5 mm wide longitudinal bands perpendicular to each other; at the intersections we observe rings of 10 mm in diameter with an inner circle of 6 mm. Each square is inscribed with a flower made up of four petals with an inner kernel separated by 5-leaf buds pointing towards the diagonals. The heart of the flower is a circle with a central button.

The decoration has been produced by chiselling: it is outlined without volume. The pattern shows a confident and quick work, achieved by a few strokes with a straight 1.5 mm chisel. The remaining space between the flower and the rim has been filled with marks made with a circular chisel with a diameter of 1 mm (fig. 5).

This plate now has a large tear, with partial or total loss of the squares, affecting columns 6 to 9 (from the left) and rows 2 to 7 (from the front face). The gap was covered –we do not know when– by inserting a new plate underneath the original one; this repair has also suffered damage: it has lost a piece the size of two and a half squares. This supplement is made of a silver alloy with a Cu content of less than 4% (Vendrell, Giráldez, Boularand 2007: 4).

It becomes apparent that the plate covering the bottom was assembled first, and fastened to the wood with nails at the edges. The plates covering the four sides of the box have an extra 6 mm smooth piece that was folded over the base plate and nailed on top. Of these flaps, the ones on the long sides are preserved; the one on the left side has been lost and part of the one on the right side remains. This shows that the short-side flaps were folded first and the long-side flaps were folded on top of them. There are at least 9 nails on the front long side, 12 on the back and 6 on the right side. It is difficult to know how many there were originally, as some reinforcing nails have been added to the edge, and nails of different sizes and metal can be seen on the inside of the plate, holding it to the wood, as well as those that retain the addition that covered the area where the original silver foil was torn and lost.

3. The Embossed Plates

The silver alloy of the visible walls of the casket has not been analysed, but by comparison with the others it can be assumed that its Ag content is at least 90%.

It is not easy to answer most of the questions about the pieces of the lining. A few places where cracks are visible suggest that no welds were made at the edges, where the foil appears to be bent, and at the junction between the framing border and the decorative panels.

The sheet is nailed to the wooden core with small nails, which are visible on the upper edge of the box and, underneath, on the flap hinged over the base (about 12 on the long sides and 6 on the short sides). They are also visible on the lower edge of the lid.

IV. Techniques Used to Decorate the Visible Faces (fig. 6)

Among all the techniques available, embossing was the one chosen by the craftsman. The decoration was created in bas-relief by working the silver leaf with a chisel and hammer on the

reverse side until it bulged out; the motifs were then worked over and finished with small chisels on the right side. The decorative effect was achieved by combining the volumes. Nothing was added by welding; there is no filigree, no cut-out or fretwork, no stones or coloured glass.

The silver embossing can be observed in other Cordoban objects contemporary to the casket, such as the two "scent bottles" from Cortijo de la Mora (Lucena, Museo Arqueológico de Córdoba [MAC] 24205) and Olivos Borrachos (Córdoba, MAC 3772).

Niello work. The decoration is completed by some motifs made in niello technique, with bluish-black areas that contrast with the light-coloured background. It is known that this ancient technique was favoured at least in the Caliphate and Taifa periods. We know from Arab sources of its use in arms (García Gómez 1967: 164) and there are three examples of Arab swords «with gilded silver garnish decorated in niello technique (*ḥilyatu-hu fiḍḍa muḏahhaba muzayyana bi-nīl*)» which were among the gifts sent by al-Ḥakam II to North African notables in 973 (M7: 133 f. 79v-80r; M7 T: 167).

It is obtained by removing small pieces of metal and placing the chemical product in the cavities or grooves, which is then subjected to the action of heat. It consists of a sulphide of Ag and Cu (with later addition of Pb) obtained by adding sulphur to molten metals in a crucible; the result is ground to a very fine powder and applied mixed with borax and moistened; it is then baked and finally filed and polished.

The recipe for niello is documented in the Islamic world in a passage from the mid-10th century Yemeni al-Hamdānī (fol. 68a):

> Silver is burnt with sulphur until it becomes the colour of Indian iron. This is done by stirring the silver in the crucible, and the silver consumes the sulphur bit by bit. It is then cast in a mould and beaten out hot. If it has started to cool it flies about like glass. If they want to inlay (?) silver with this (compound), they pound it up with borax (*tinkār*) and water, and fill the place dug out of the silver with this pulverised material. It is allowed to flow like solder in the oven, and it does so. Files and rasps are then used on it (trad. Allan 1976: 48).

The presence or absence of Pb in the composition is an important detail that can reveal the chronology of the pieces. A study carried out at the British Museum on 180 metal objects of different provenance (none Andalusian) and a wide chronology (1st to 20th centuries) concluded that Pb began to be used in the 12th century (La Niece 1983 apud Viegas 2011: 195).
Tests carried out at the Victoria & Albert Museum on the use of the niello technique for the fittings of three caskets thought to date from the Caliphate period (V&A N. I. 217-1865, A.580-1910 y 368-1880; Viegas 2011: 195) have given inconclusive results, but have shown the presence of lead in the first two. This has led to the question of when lead was introduced into the recipe.

As Viegas points out, it cannot be assumed that all the fittings whose shapes coincide with the undecorated areas of the ivory are original, as it is easy for a craftsman to make new ones to fit these spaces (Viegas 2011: 193). Therefore, the chronology of these fittings, which are supposed to be contemporary with the ivories, should be questioned.

The analysis of the niello from the Girona casket has shown similar proportions of Ag and Cu to those of the base plate and a significant amount of sulphur, but no Pb has been detected (Vendrell, Giráldez, Boularand 2007: 5-6).

Among the few pieces of Andalusian silverwork that have survived are the Caliphate jewels from the Garrucha treasure (Instituto Valencia de Don Juan, Madrid): a pair of bracelets, an anklet and four necklace beads. According to the analyses carried out at the IPHE when they were restored in 2000, their silver content is 93.4% and the niello is made with silver sulphide, with no lead (Pérez Grande 2001: 223). Somewhat older is the gilded silver vessel with decoration and epigraphy in niello technique (Museo de Teruel 629), a gift of the second Taifa king of Albarracín (1045 - 1103) to his wife (Almagro 1967; Al-Andalus 1992: 219). The silver oval case with palmettes and a niello inscription of San Isidoro de León, preserved in the MAN 50889, could also belong to this period (Al-Andalus 1992: 214).

The niello is not present throughout the Girona casket, but in some specific areas:

- in the letters of the inscription that runs along the entire base of the cover,
- in some of the appendices of the epigraphic band,
- in the decoration of the palmettes and flowers,
- in the decoration of the fittings.

Gilding. The silver plate was then almost completely gilded, which prevents oxidation and keeps the plate shiny and bright in colour. Gilding was done by applying an amalgam of gold and mercury to the plate; when heated, the mercury evaporates, leaving a thin layer of gold on the surface. It is an ancient technique that has been widely used throughout the ages.

The analysis of the gold revealed that it is composed of Au 90%, Ag 8%, Cu 2%, an alloy close to what is known as yellow gold (Vendrell, Giráldez, Boularand 2007: 6-7).

In some areas at the bottom of the reliefs there are reddish traces of something that could be a varnish. Infrared spectroscopic analysis indicates that it contains calcium oxalate, calcium stearates and to a lesser extent calcite and kaolinite, together with resin from a plant, apparently of the *Pinaceae* family (Vendrell, Giráldez, Boularand 2007: 10-11). If original, it would raise an interesting question about the colour(s) of the chest, which would then not be the all-black-and-gold piece we see today.

V. Motifs in the Decoration of the Visible Faces

The surfaces corresponding to the four rectangles of the box, the four trapezoids of the lid and the rectangle of the top are decorated as a single unit, composed of a series of motifs combined and distributed according to the space available.

The main motif (fig. 7) is a double palmette formed by a symmetrical forked leaf decorated with niello, with a central bud and two almonds on either side, all framed by a cord that winds around it to form a rounded area.

The main motif is in the following points:

Box: two rows of 3 + 3 on the front; two rows of 1 + 2 + 1 on the back; two rows of 3 on the sides.
Cover: bottom row of 2 + 2 at the front; 1 + 2 + 1 at the back; 2 at the sides.

It is worth mentioning that the niello on the palmettes on the sides and front of the box and lid does not include the almonds, which are nielloed on the back of the box.

The secondary motif (Fig. 8) is a flower consisting of a central hemispherical bud and eight petals, the odd ones being spindle-shaped and decorated with niello, while the even ones are drop-shaped and gilded only. All are framed by a cord that wraps around the flower in a circle.

The secondary motif is found in the following places:

Case: 6 on the front, framing the clasp; 1 + 1 on the back, at the top, next to the hinges.
Lid: top row of 2 + 2 on the front, 1 + 2 + 1 on the back and 2 on the sides.

The remaining motifs were carved by adapting them to the space left after the palmettes and flowers had been distributed. Each has its own individual, distinct shape, which can be generally described as: bud with 3, 5, 7, 9 leaves; symmetrical leaf; asymmetrical single, double or triple leaf; almond; hemispherical bud; drop-shaped bud; four-petalled flower.

A semicircular band in pearly relief acts as a link between the main motifs and as a secondary frame: it frames each of the panels and the epigraphic cartouches on the base of the lid; it surrounds the fittings; it surrounds the palmettes; it surrounds the petals of the flowers; it forms circles enclosing the palmettes and the flowers and the stalks from which the leaves emerge.

Another, wider band with a curved teardrop design in relief runs along all the edges of the chest, acting as a general framing border for the faces. The teardrop motif slopes in the opposite direction

from the centre of each face and is symmetrical in adjacent panels, becoming oval at the corners. It is also found in the mouth of the box and the lid, with half a motif on each side.

I will not analyse in detail the decorative composition of each panel. Nor is there space to discuss the parallels, similarities and differences between our ornamental motifs, especially the palmette, and those found in Andalusian architectural stone decoration. (Vallejo 2004). All of this merits a separate paper.

VI. The Epigraphic Band (fig. 9)

The base of the lid has a 26 mm high epigraphic band starting on the front face and running along all four sides, with an Arabic inscription in kufic script (height of the *alif*: 20 mm). The text is arranged in seven cartouches: two on the front, one on the side, three on the back and one on the other side. The letters are embossed and the inside is covered with a thin dark layer, leaving a thin border; the epigraph thus stands out in bold black strokes against the light-coloured work as a whole. The content of the inscription and its translation have been discussed elsewhere, so I will only recall that it reads:

> En el nombre de Dios. Bendición de Dios, prosperidad, felicidad y alegría perpetua para el siervo de Dios al-Ḥakam, el príncipe de los creyentes al-Mustanṣir bi-llāh. Lo mandó hacer para Abū-l-Walīd Hišām, el heredero designado. Se llevó a cabo su decoración durante el mandato de Ŷawḏar (Labarta 2015: 13). [*In the name of God. God's blessings, prosperity, happiness, and everlasting joy upon the servant of God al-Ḥakam, the prince of the believers, al-Mustanṣir bi-llāh. He had it made for Abū-l-Walīd Hišām, the designated heir. It was decorated during the reign of Ŷawḏar.*]

Jenkins has suggested that the epigraphic band on the casket was an avant-garde technique for its time, with the letters being formed independently, filled with niello and then soldered to the silver leaf:

> The niello [...] of the nonepigraphic decoration on the Girona casket is inlaid into the incised surface of the pieces, whereas the inscription on the casket consists of independently formed cups inlaid with niello, which are then individually attached to the surface of the object – that is, the alloy is not laid directly into the sheets forming the surface. Gilded silver objects decorated with inlaid cups soldered to the surface were to become a hallmark of the jeweler's art of al-Andalus, at least until 1492- the end of the Islamic period- while the other technique of inlaying niello does not seem to have spawned any later Andalusian examples (Jenkins 1994: 94).

His claims are misleading, as the letters are not welded but embossed into the plate in the same way as the rest of the decoration on the casket. This can be seen in some places where the thin layer of niello has been lost and the silver is showing through, such as in the *sīn* of *surūr*; and there are also visible the traces of the burins that finished the contours, as well as those that can be seen around the other decorative elements.

Some of the letters of the inscription have been extended with appendages that simulate leaves or buds. These appendages are not completely nielloed, like the letters, but are decorated with fine lines. This can be observed in the final *mem* in *bi-smi*, *dā'im*, *al-Ḥakam* and *tamma*; the final *nun* in *min*, *yumn*, *mu'minīn* and *al-muslimīn*; the *rā'* in *baraka*, and the second *rā'* in *surūr*; the *dāl* in *li-'abd* and that in *Ŷawḏar*. Note that there is none on the back side.

Occasionally, small embossed floral motifs appear alongside the letters to fill in the gaps, especially in the upper part of the writing space: there are two over *wa-yumn,* and *wa-sa'āda* and three over *wa-surūr*; one after the *dāl* in *dā'im,* one after *dāl* and others over *mīm* and behind it; there are also some over *'ayn* in *'Abd*, under *al-Ḥakam*, over *amīr*, one large double over *al-muminīn* and a small one at the end; two over *al-mustanṣir* and one on the top left corner; we can also find them over the *mīm* in *mimmā*, *min* and *bi-'amali-hi*; over the *yā'* in *li-Abī, al-Walīd* and *walī*, and over the *wāw* in the last two; over the *šīn* and the *mīm* in *Hišām,* three over *al-muslimīn* and one between *yaday* and *Ŷawḏar*.

VII. The Fittings

The casket is completed by a series of additional metal elements: a handle; two pairs of polyhedral bodies crossed by rings on the sides; two bands that descend from the roof and connect the lid to the box at the back with hinges; a band that descends from the lid at the front and is connected by a hinge to the movable part of the clasp; the clasp, from which a ring hangs; the fixed part of the clasp, made up of three rings; the latch.

Descriptions of the casket note that it «preserves its original fittings» (Gómez Moreno 1947: 108), «preserves beautifully decorated hinges, locking pin and handle» (Gómez Moreno 1951: 337) or they mention that «it is, topped by a bronze handle also enamelled and gilded, with metal (perhaps bronze) clasp and hinges covered with embossed silver plates» (Vives 1893: 99).

The appearance and decoration of the bands joining the lid to the body do not differ from that of the embossed plates. In the absence of more specific evidence, it is difficult to determine how these fittings were made and what metal they are made of.

The Handle (fig. 10)

Some authors mention the presence of the handle, briefly describing its characteristics and highlighting its beauty: «On the upper part of the lid there is a lobed bronze handle of very beautiful form» (Girbal 1877: 332 = 1886: 163); «in the centre of the lid is a three-lobed handle» (Gómez Moreno 1947: 108); «The upper flat part of the lid has a handle in the shape of three

round arches with simple floral decoration» (Ylla-Català 1988: 155); «the handle, made up of three arched sections; the ends are incurved and finished with striated acorns» (Al-Andalus 1992: 208).

The handle is nielloed and gilded. It measures 110 mm wide x 47 mm high; it has three semicircular arches of 23 mm internal diameter separated by two 2 mm spheres at the bottom; at the outer ends there are flat protuberances in the form of fins or leaves decorated with niello. At the end of the arches, there is a smooth semicircular moulding flanked by two thinner mouldings; from there, a stem with a circular section of almost 5 mm ø descends, continuing the curve of the arches, passing through two rings (12 x 7 mm) nailed to the top of the casket and returning upwards to end in two acorns with oblique grooves. The inner and outer edges of the arches are outlined by fine lines in relief; on the body, the most bulging area is decorated with droplets made in niello-technique. The arches of the handle are gabled at the top, with symmetrical parallel curved incisions on either side, starting from a central axis. The resulting bands are decorated with alternating smooth and striped bands with small incisions (fig. 6).

In the Agate Casket from León, the handle is also held in place by two rings whose shanks go through the wood and open up; a metal disc protects the wood on the inside, although it has not prevented it from splitting from one side to the other. The two rings through which the handle of the casket of Girona passes go through the wood of the lid and it can be seen through the fabric of the lining that they are open on the inside; but no metal parts can be seen between them and the wood.

The Side Handles

Ylla-Català mentions that «on each side, the casket has small handles in the shape of rings» (Ylla-Català 1988: 155). Indeed, in the middle of each side of the casket there is a pair of rings (maximum ø 12 mm; thickness 1.5 mm), one in the base of the lid and the other in the upper part of the body, which pass through two perforated metal plates. These plates have the shape of a cuboctahedron, i.e. the polyhedron obtained by truncating the vertices of a hexahedron at the mid-points of the edges: there are eight triangular faces and six square faces (3.5 mm on each side); one is in contact with the casket and the ring passes through two of them; the whole plates are gilded. The same pair of rings are present in the casket of Martin of Aragon (Silva 2010: 34). What were they used for? According to Casamar, the casket «has rings on its sides that would hold the bands used to seal the relics, preventing looting, and preserving their authenticity» (Dos Milenios 2000: 248).

It is true that two of the rings are in the epigraphic band; the other two are carefully placed around the palmettes. In my opinion, they are original and would be attached to an element, perhaps a

chain, that would keep the lid in balance and prevent it from falling backwards when the box was open. The casket of the hounds (MAN NI 51015) preserves a rigid metal mechanism for this purpose on the sides.

The Rear Bands (fig. 11)

Two silver-plated bands, embossed, gilded and decorated with niello, run around the casket from the top to the base of the back, holding the lid and the body together. The bands are made up of 16-mm-wide strips that end in 38-mm-wide x 60-mm-long lance-shaped flares at both ends. The strip is decorated with a row of lozenges placed next to each other; at the point of contact there is a nielloed button with a four-petalled flower; next to it, inside both ends of the lozenge, are two hemispherical buttons: these are probably the heads of the nails that hold the iron fittings to the wood. In the remaining space, we find motifs reminiscent of a lotus flower. The ends are decorated with four large nielloed buttons with four-petalled flowers, surrounded by pearlescent cord, and a central row of buds.

Casamar was wrong in stating that the fittings «are simulated, as they are embossed on the same sheet, except for the hinge that acts as a clasp» (Teruel 1988: 75; Al-Andalus 1992: 208; Dos Milenios 2000: 247). But other authors have already reproduced this error: «The components of the clasp are embossed on the same plate, with the exception of the hinge that acts as a clasp» (Islam i Catalunya 1998: 59); «the fittings, carved in the same plate as the body and the lid,...» (Madinat al-Zahra 2015: 193). Apart from the fact that it seems pointless to draw and emboss useless fittings and that this is not the case in any of the preserved caskets, reality refutes this claim.

The Clasp (fig. 12)

The clasp of the casket has also been addressed by a number of authors: «A bronze frame covered with a metal plate, starting from the lid goes down the middle to be fastened to the lower part of the body of the casket with a simple but elegant bolt.» (Girbal 1877: 332 = 1886: 163); «fastens with a finely ornamented band and clasp of bronze» (Williams 1908, I: 46-47). Rosser-Owen's study of the clasps and hinges of ivory caskets, which deals with their shape, decoration and fastening methods, also discusses those of the caskets from Girona and Pamplona (Rosser-Owen 2012: 307-310).

A band similar to the ones at the rear runs along the casket from the lid to the centre of the frontal panel. In this case, one of the lance-shaped flanges acts as a movable part of the closure (fig. 13); it ends in a 5 mm thickening from which hangs a ring (2 mm thick; 17 mm ø) that was intended to serve as a handle for easier opening. It is raised or lowered by a hinge on the lower edge of the lid. When lowered, it passes through the central hole (14 x 12 mm) through one of the three parallel rings (7 mm) nailed to the box, which form the rigid part of the lock. A threaded pin (75

mm long; 4 mm thick, with an 11 mm ø cap at one end) passes through the three fixed rings; a nut screwed on the other end prevents the casket from opening during transport (fig. 14).

In the Agate casket from León, The clasp has a hole through which the central ring of the three available rings passes; the pin has been lost. There is also a ring hanging from the movable part of the clasp, the presence of which has already been analysed for the casket of Girona and for other ivory caskets (Rosser-Owen 2012: 308).

It should be noted that the box has no lock or padlock, or any kind of security lock, indicating that there was little danger of its contents being stolen, either because there was no opportunity to do so, or because it was an unmistakable object that could not be sold or transformed.

Other interesting later mechanisms contrast with the ingenious but elementary closures of this and other 10th century Andalusian caskets (Rosser-Owen 2012: 308). In the casket of Martin of Aragon, there are two rotating handles on both sides, with Arabic lettering on both the fixed and the movable part, which lock the pin, thus turning it into a small safe with a combination locking mechanism (Silva 2010: 33). The surrounding Qur'anic quotations promise Allah's mercy on the Day of Judgement (Qur'an 12:92) and «Allah's help and an impending victory. And announce the good news to the believers!» (Qur'an 61:13). They also allude to the fact that «Allah is the Best Protector» (Qur'an 12:64) and that «whatever you spend in charity, He will compensate you for it. For He is the Best Provider» (Qur'an 34:39), which suggests some connection of this box with the collection of the mandatory alms (zakat).

The ivory chest from the cathedral of Maastricht, which dates from around 1200, bears four crowns with incised Arabic kufic numerals and movable hands to form a security combination. Although this piece has been considered to be of Andalusi origin (Maroc 2014: 72), the order of the letters of the abŷad seen on the clasp belies this provenance.

Once lifted, the movable knocker on the lid of the casket of Girona reveals a small round hole on the back that is thought to coincide with a small projection in the box, which no longer exists. It also bears an incised inscription in Arabic, in very beautiful kufic script, which reads «A work of his servants Badr and Ẓarīf» (Labarta 2015: 13, 15). Fine lines were drawn to guide the writing, and the path of the burin as it traced the letters and ornaments can be seen in detail (fig. 15).

When the casket is closed, part of the front panel is hidden behind the movable part of the clasp, but it is visible when the casket is open. This space was not embossed, which would have made it difficult to fit the clasp properly, but neither was it left undecorated. A motif of palmettes and vegetal stylisations, with a vertical axis of symmetry surrounding the central ring, was engraved. This is another detail of the chest that has never been published before (fig. 16).

VIII. The Interior

What does the inside of the chest look like and what is in it? No publication, old or new, answers these questions. There is speculation about its possible use as a reliquary, although it is not specified what it might contain, which adds to the intrigue without satisfying our curiosity (Labarta 2015: 17).

When we open it, we see that the casket is empty (fig. 17). If, during the five hundred years (at least) that it was on the altar of the Cathedral, it ever contained relics, of what kind, and what has become of them, is a subject on which I have no information and which would have to be researched and documented.

The interior is lined with a burgundy-red cloth, smooth, faded, stained, somewhat torn and battered. The cloth is glued to the wood, although it is visible in some places where it has come loose, near the opening. On the body, five carelessly cut pieces of cloth cover the bottom and sides; there are no visible seams, hems or over-threading. A single rectangular piece has been used for the lid, which has been adapted by cutting or folding at the oblique edges.

According to the study carried out on this lining by the team Patrimoni-UB, it is silk (fibroin) with taffeta fabric, also known as plain-woven fabric (both warp and weft consist of a single thread). The weft yarns are of larger diameter and have lower tension than the warp yarns. The twist of the warp yarns is a regular Z-twist (left-hand twist) at about 70 degrees. The density of the weave is 25 weft x 30 warp threads per square centimetre. The unravelling of a small fragment of fabric revealed less coloured areas in the threads, which is evidence that the fabric was dyed after weaving, rather than the threads being dyed first and then woven (Vendrell, Giráldez, Boularand 2007: 7-9).

What colouring material was used to dye it and at what time it was placed are other new questions that remain to be answered.

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Fig. 1 View of the left side of the casket. Note the rings, the little nails in the opening of the box and the lid; at the bottom there is a crack between the pearl decoration and the drop decoration (Chapter of the Cathedral of Girona – All rights reserved)

Fig. 2 Detail of the joint between the wood of the right side and the base; the points where the silver leaf was nailed to the base can also be seen (Chapter of the Cathedral of Girona – All rights reserved)

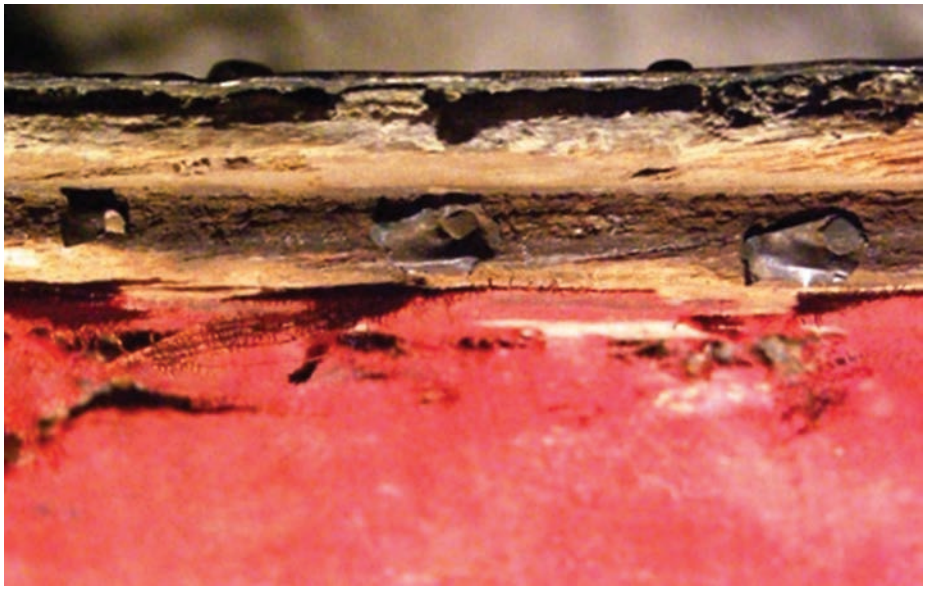

Fig. 3 Three nails in the opening of the casket with remains of the silver leaf that covered it. Photography by Màrius Vendrell (Chapter of the Cathedral of Girona – All rights reserved)

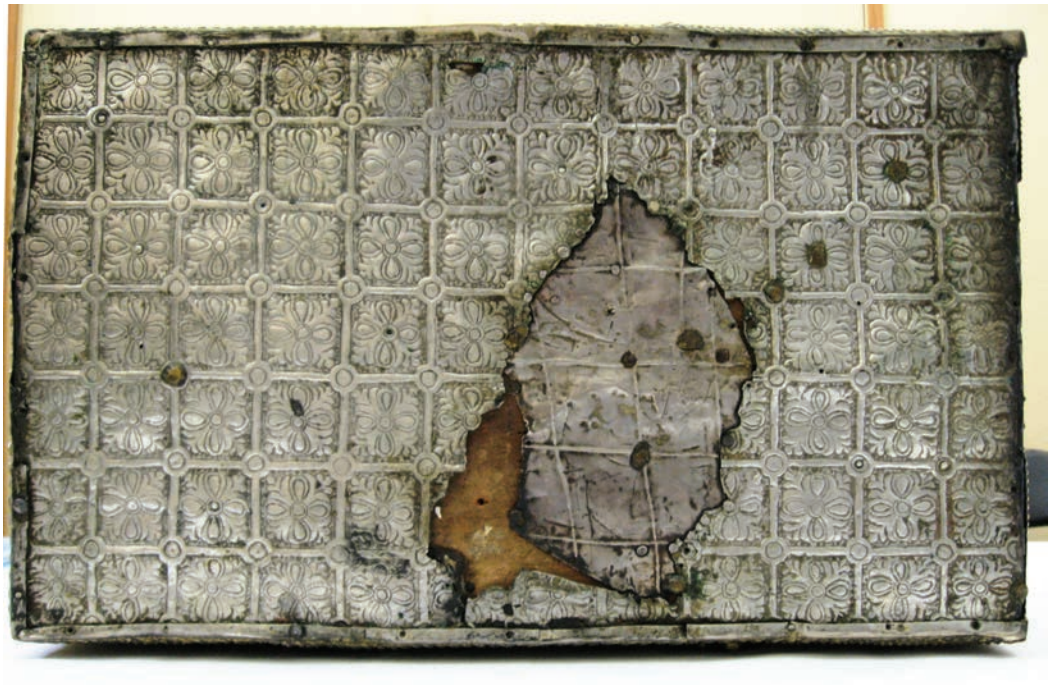

Fig. 4 Base of the casket. (Chapter of the Cathedral of Girona – All rights reserved)

Fig. 5 Detail of a square of the decoration of the base (Chapter of the Cathedral of Girona – All rights reserved)

Fig. 6 Right half of the frontal slope. The embossed motifs, the upper edge of the handle, the decoration of the ironwork and two modern nails securing it to the plinth can be seen. (Chapter of the Cathedral of Girona – All rights reserved)

Fig. 7 Palmette (Chapter of the Cathedral of Girona – All rights reserved)

Fig. 8 Eight-petal flower motif (Chapter of the Cathedral of Girona – All rights reserved)

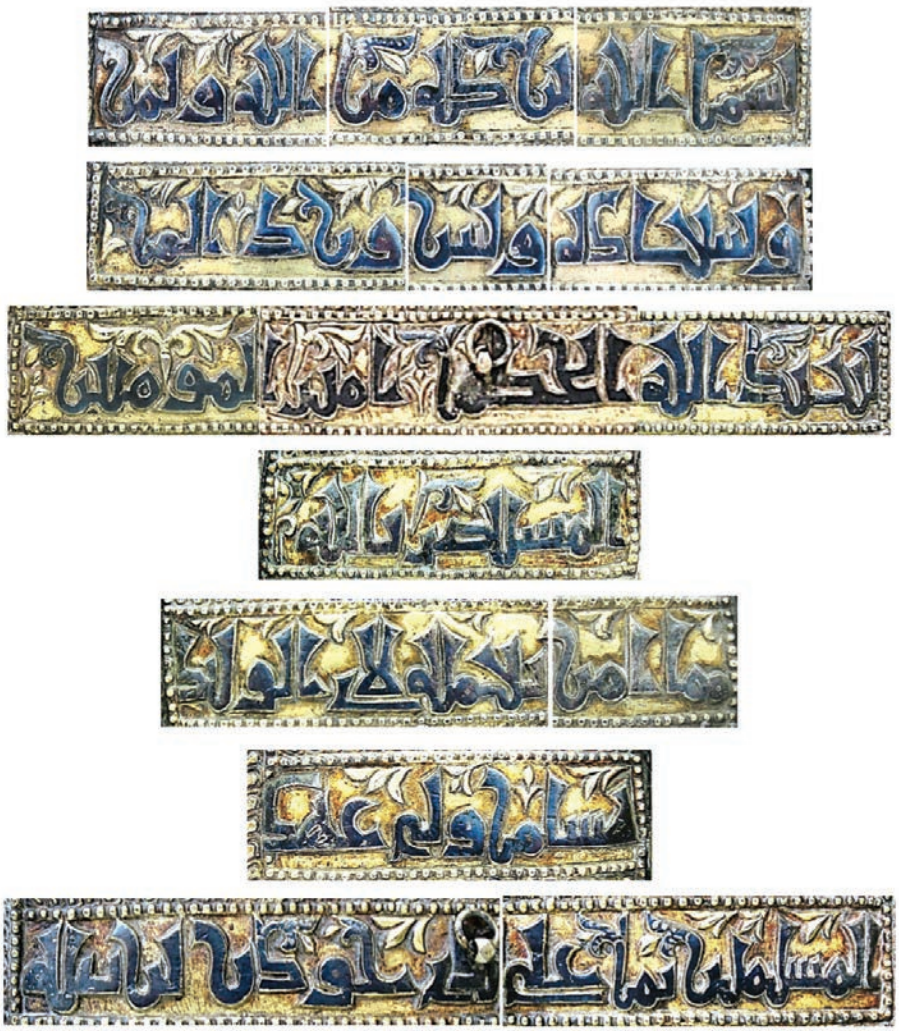

Fig. 9 Epigraphic bands on the casket (Chapter of the Cathedral of Girona – All rights reserved)

Fig. 10 Detail of the centre of the lid with the handle and the widening of the central fitting (Chapter of the Cathedral of Girona – All rights reserved)

Fig. 11 Left side of the back; note the nielloed almonds on the sides of the palmettes and the vertical motif on the outer rim (Chapter of the Cathedral of Girona – All rights reserved)

Fig. 12 The clasp of the casket. Photograpy by Màrius Vendrell.(Chapter of the Cathedral of Girona – All rights reserved)

Fig. 13 Movable part of the clasp (Chapter of the Cathedral of Girona – All rights reserved)

Fig. 14 Locking pin and nut (Chapter of the Cathedral of Girona – All rights reserved)

Fig. 15 Inscription on the back of the clasp (Chapter of the Cathedral of Girona – All rights reserved)

Fig. 16a Detail of the engraved decoration under the clasp: the three rings on the attached part of the clasp and the six embossed and nielloed flowers that surround it (Chapter of the Cathedral of Girona – All rights reserved)

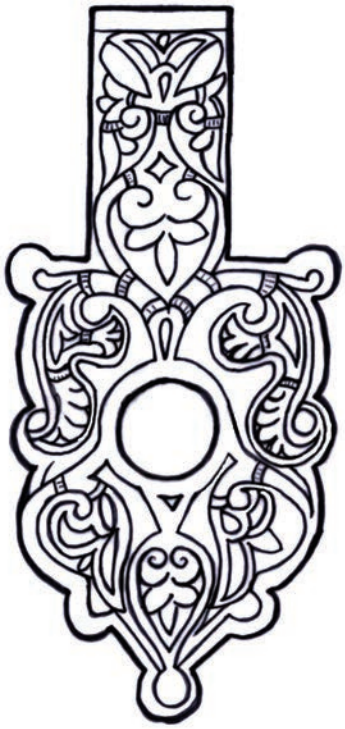

Fig. 16b Drawing of the chiselled decoration under the clasp

Fig. 17 Interior of the casket. (Chapter of the Cathedral of Girona – All rights reserved)