Crux Mensuralis of Grottaferrata and Shroud of Turin

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Abstract

In the Abbey of Grottaferrata there is a Crux Mensuralis (CM) made of cemented marble and fixed in a wall of a hidden corridor. The archival documents indicate that this unusual religious object was in the Abbey since the end of the 19th century, but another one was there since the 17th century and very likely well before that. Because the CM is credited to report the dimensions of Jesus Christ, its same existence in Grottaferrata, probably the only one existing in the world nowadays, provides important clues on the Shroud of Turin when it was not yet known in the West.

Keywords: Crux Mensuralis, Abbey of Grottaferrata, Hagia Sophia, Shroud of Turin, dimensions of Jesus Christ.

1. INTRODUCTION

In an inconspicuous corridor leading to the sacristy and to the medieval bell tower of the ancient church of Saint Mary in the Greek Abbey of Grottaferrata, a small town on the slopes of the Alban Hills south of Rome, there is a cross embedded in a plastered wall at man height. The cross is rather unusual because it is very different from the well-known Greek and Latin shapes, and at a first visual and hand examination seems to be made of the rare red porphyry. Moreover, it is so well hidden that the common citizens of Grottaferrata do not know its existence and, still more, several recent books describing the ancient and historical Abbey totally ignore it [1 - 3]. However, when the monks still servicing the Abbey were asked about this cross, they answered unanimously that it is a Crux Mensuralis (CM), but they do not know when, how and why it was brought there, although the oldest one among them remembers having seen it, in the very same place where and how it is today, since the thirties when he arrived as a novice at the Abbey [4]. Figure 1 shows a photo of the CM taken in its context just entering the corridor from a chapel of the church and looking at the right side. Although the CM of Grottaferrata (CMG from now on) is not known to the public at large in Grottaferrata and in Italy, this is not the case for some Italian scholars [5 - 8]. They do not say very much about the CMG, but what little they say is interesting enough for the present work to be reported here.

Zaninotto [5], who saw the cross, writes at pages 22-23: I would like here to remind, for the venerable antiquity of the place and for the Greek community, the cross of granite in the Abbey of Saint Nile in Grottaferrata, near Rome. It has been moved to the corridor near the bell tower since the beginning of the century: nobody knows from where. The popular tradition believes that the cross displays the dimensions of the venerable body of Christ, but up to now there is not any substantiating documentation about. Moreover, its story is unknown. The cross is 178 cm high and 48.5 cm large. The relatively short width could recall a Greek origin rather than Latin.

Ricci [6], who saw the cross, writes at pages 381-382: The transversal dimension of the CM of Justinian corresponds to the width of the shoulders, as in the body image of the Shroud: exactly like the CM that "ab immemorabili" is worshipped in the byzantine Church of Grottaferrata (179 cm x 48.8 cm), certainly a faithful copy in red granite, inspired to that of Constantinople, which displays the same two characteristic measurements: 179x50.

Coppini and Cavazzuti [7] writes at page 54: The CM made by Justinian does not exist anymore, very likely disappeared during the sack of Constantinople in 1204. The Greek Abbey of Grottaferrata keeps one copy of it in a reduced form. The western tradition kept the memory of the CM until the French revolution (1789). Nowadays, it has been completely forgotten, together with its effects on the formation of the image of Christ.

Volterri [8], who saw the cross, says: *Here, in the Abbey* (of Grottaferrata), *in a room adjacent to a small chapel* (the Farnesian chapel) where evocative marriages are often celebrated with the byzantine rite, it is possible to observe a strange cross, exactly 1.80 m tall, with the patibulus very narrow. Let's say like the width at the shoulders of a tall adult man. It is the "poor" copy of the precious CM of the emperor Justinian and lost in 1204. It is made of red porphyry and sits in a relatively hidden place.



Figure 1. The Crux Mensuralis of Grottaferrata fixed on a wall of a secluded corridor called "Il Salvatorello" below a renaissance fresco depicting the Saviour and Saints, and at its side the old roman wall of the "crypta ferrata". A window with iron bars is prominent on the wall. The photo has been taken on December 29, 2009.

The previous scholars give us much conflicting information. The CMG, made of red granite or porphyry [9], is a poor copy or a reduced form of the precious CM created at the time of the emperor Justinian according to the dimensions of the body of Christ, taken very likely from the body image of the Shroud. Moreover, there are not historical documents available and so the origins of the CMG are unknown, but it has been worshipped since immemorial time in the Greek Abbey of Grottaferrata. Although this last information on the worship does not correspond to the reality, at least in recent times when, according to the monks of the same Abbey, not only the memory but also its use in the Byzantine liturgy has been completely lost, there were enough references to the CM, the emperor Justinian, the Byzantine world, the body of Christ, and the Shroud, which raised many questions and stimulated our interest to find out the whole story of the CM, by resorting as much as possible to reliable documentation. So, on one side we started to put together a credible story of the CM from the beginnings in the Eastern Roman Empire, later on also known in western Europe as byzantine empire, and on the other side we started to search systematically in the rich archives of the Abbey of Grottaferrata, which nowadays is the last monastery in Italy still using the old Byzantine rite attributed to St. John Chrysostom.

2. CRUX MENSURALIS

According to an anonymous monk of the 12th century, "The venerable cross, which today is in the Skeuophylakion (of Hagia Sophia in Constantinople), reports the height of our Lord Jesus Christ which has been accurately measured in Jerusalem by faithful and trustworthy men. They made it of silver, decorated with precious stones and covered with gold. Up to nowadays it takes care of diseases, chases away illness and devils" [10]. According to a broad literature, the measurement of Christ took place under the reign of Justinian I, 527-565, who sent the above mentioned faithful and trustworthy men to Jerusalem where, very likely, they measured the height and width at the shoulders of Christ from the Holy Shroud itself which was still in Jerusalem [6].

In this regard, it is also necessary to remember here that there is not any reference to this precious CM in the many and detailed works of Procopius of Cesarea (500-565), who was the historian *par excellence* of the Justinian period. It is very strange that an object like the precious CM could have escaped such a careful scholar. This singular lack of documentation together with other similar ones regarding religious subjects, the Mandylion for instance, casts some doubts on the story told by the anonymous monk, who, as has been suggested, may have been citing a late and unreliable Latin source [11].

However, it is also possible that Procopius considered the episode of the CM as a minor religious one not worthy to be reported in its Histories, taking in consideration that other important relics and sacred objects were already in Constantinople, among them many precious crosses. Moreover, there are other sources which witness the existence of the CM as an historical object.

In the context of the Passion ritual in Constantinople around 950, there is a reference to the famous cross, once in the Skeuophylakion of Hagia Sophia and used in the liturgy, which was exactly the size of Christ's body and contained the true relics of the Passion [12].

The measurements of the precious CM are reported in a parchment containing three lines of Latin words "Haec linea bis sexties ducta mensuram dominici corporis monstrat. Sumpta est autem de Costantinopoli ex aurea cruce facta ad formam corporis Christi" [13]. In the same parchment there is the figure of Christ holding a stylized cross in his left hand and standing on an elaborated pedestal 15 cm long. The short Latin text says "This line (pedestal) multiplied by two times six indicates the measurement of the body of Christ. Moreover, it has been taken in Constantinople from the gold cross shaped in the form of the body of Christ". In conclusion, the length of the precious CM is 15x2x6=180 cm! The above mentioned document is a folio of a richly decorated Book of Hours dated 1293. Because similar devotional books were very popular in the Middle Ages, it is logical to deduce that the folio itself or the information contained in the same were very much known at that time, and so their

origin could have be well before the 13^{th} century, and the tradition continued at least up to the 15^{th} century [14].

A CM was erected in the 10th century outside Hagia Sophia, and it was still there in 1202 when Antony, bishop of Novgorod, visited Constantinople and wrote "Extra sanctuarium minus, erecta est Crux Mensuralis, quae, scilicet staturam Christi secundum carnem indicat", i.e. "Outside the minor sanctuary there is a Crux Mensuralis which without doubt indicates the height of Christ according to his body" [15]. There is more information about the CM, also concerning the connections with famous relics like the Image of Edessa and the Shroud, which can be found with some details elsewhere [5, 6, 16], but here we are interested to stress its liturgical aspects which started in the 10th century in Constantinople and spread widely in the Byzantine world. Indeed, since then the Orthodox Church developed a keen passion for the physical characteristics of Christ and, as far as the CM was concerned, special liturgies were developed especially for the Passion [12, 17] and celebrations for the dead [16]. Moreover, the Nartex occupied a special place in important ceremonies, for instance as the starting point of solemn processions who took hours to reach the final destination, usually the altar, iconostasis and bema, of the same church or more rarely another church or place of the city.

In conclusion, in the 12th century there were in Constantinople at least two CMs, the precious one of Justinian inside Hagia Sophia, and the other one of unknown material just outside it. They both disappeared after the sack of Constantinople in 1204, and they are not mentioned anymore since then. Very likely, there were copies of the CM utilized in other churches in Constantinople and in other religious buildings of the empire for the same functions, especially in the regions under the direct jurisdiction of the Patriarchate of Constantinople, but there is not any historical record about them.

About the two historical crosses in Constantinople, their looks are not known but, as far as the precious one in concerned, an educated guess can be made. Indeed, at the same time there were other precious crosses which were used in Haghia Sophia during various ceremonies, and often these crosses were also depicted on the walls of churches as paintings and mosaics, as the famous ones of Ravenna, Italy, at that time territory of the Eastern Roman Empire. Figure 2 shows the photo of a typical Byzantine jeweled cross of the same time as the precious CM. This magnificent cross, made of gold and precious stones, is only a glimpse of what could have been the precious CM of Justinian, who did not limit the richness of the empire when the religion and its image were at stake.

3. CRUX MENSURALIS OF GROTTAFERRATA

As stated in the introduction, after our rediscovery of the CMG in December 2009 a systematic search was started

in the archives of the Abbey, and up to now relevant documentation has been found as described in the following.



Figure 2. This jeweled cross, 40 cm x 30 cm without the base, was given to pope John III by the emperor Justin II in the 6^{th} century. A piece of the true cross is contained at its very center. It still stands in the treasure of the Vatican in Rome and it is known as *Cross of Justin II* or *Crux Vaticana*.

On January 22, 1890, the Abbot wrote to the Cardinal of Turin asking him the dimensions of the body image in the Shroud of Turin. The request was justified because in the sacristy there was a Cross embedded in a wall which, as written in an epigraph (now lost), reproduced the height of Christ as taken by the Sacred Shroud, and there was concern that its dimensions could have been modified during some restoring works. This Cross is said to be black (Black Cross) by the hieromonk Antonio Rocchi [18].

On January 30, 1890, the Cardinal sent an artistic print, made in 1876, of the Shroud of Turin reporting in the margin the length of the body image, 178 cm, and the dimensions of the Shroud, 410x140 cm. Nothing is said about how the body image was measured, and the dimensions of the Shroud very likely contained a typographical error, since indeed its true dimensions are 440x110 cm. On February 7, 1890, the Abbot thanked the Cardinal and told him that a new CM was being planned in accordance with the Sacred Shroud. Indeed, a new cross made of cemented marble was commissioned to an artisan of Frascati, and fixed in the wall on July 28 of the same year. On August 2, the rev. prof. (Ermete) Binzecher, in the Abbey for a spiritual retreat, returned to Rome bringing with him a petition for 100 days indulgence to anyone kissing the cross.

The new cross was made of a special material mixing looking like a porphyry/granite, a lost technique since then, and no mention on the fate of the old Black Cross is reported in the available documents [18]. The complete dimensions of the CMG are reported in Figure 3 for sake of completeness.

Up to this moment, there is no other information referring directly and clearly to the CM, but there are interesting traces worthwhile to be reported here.

In 1877, an inventory of the property of the Abbey reported in the corridor of "Il Salvatorello", among other objects, a "*Crocefisso a muro*", i.e. a crucifix in the wall, most probably the already mentioned Black Cross, although in plain Italian language a crocifisso means a cross with the body of Christ nailed to it [19].

In 1823, Queen Maria Cristina of the House of Savoy visited the Abbey. She was a very religious woman, and the owner of the mount Tuscolo overlooking Frascati and Grottaferrata, where once there had been the very old town of Tusculum connected during the 11th century with the founding of the Abbey of Grottaferrata.

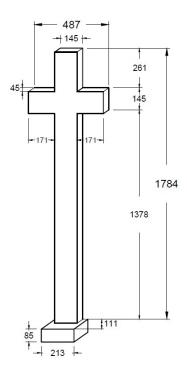


Figure 3. A perspective design of the Crux Mensuralis of Grottaferrata. The dimensions are in mm with an error of a few mm. The cross has been made of cemented marble with sharp angles and polished with care, a technique known and utilized in the 19^{th} century.

There is a map copied by the abbot Giuseppe Cozza-Luzi (1881-82) from an original one (mappa Barberini) dated before the 17th century, which reports the existence of a "*crocetta*" (literally small/nice cross) overlooking an open space utilized in the past as a cemetery. The "*crocetta*" was on the external wall of a room containing funeral accessories, and adjacent to the then Chapel/Narthex of the Basilica [20].

In 1661, the Latin bishop Antonio Severoli, on a Apostolic Visit to the Abbey, ordered to place crosses as soon as possible in the high places of the corridor of "Il Salvatorello", because it was adjacent to the old cemetery of the Abbey. The original phrase is in Latin "Dominus mandavit opponi cruces in parte superiori quam primum" [21]. Very likely, the Black Cross was made at that time or, already existing in other places, was moved there for the occasion.

An old Typicon of the Abbey [22] reports about various religious objects, and in particular a "*cross*", probably of big dimensions, nearby the main door of the Narthex in the medieval time, 12th century, that was related to several liturgies, and most probably also to the ceremonies for the dead [23].

The information presented up to now is important because it sheds some light on the CMG and other special crosses which exist and have existed in the Basilica of Grottaferrata since old times. But it does not tell us a logical story of why they were in the Basilica in the first place, when they were placed there, and why they were forgotten for such a long time, even up to the present. In order to answer appropriately these questions, it is necessary to put together the stories of the CM in Constantinople, of the Byzantine empire and its liturgies, of the connections between Latin and Greek Churches, and finally of the Basilica of Grottaferrata.

4. DISCUSSION

The Abbey of Grottaferrata was founded in 1004 by monks led by Nilo di Rossano, soon after his death a Saint, on a property where the remains of an old Roman villa were still prominent and donated by the Count of Tuscolo. At the end of 1024 a monastic church was dedicated to the Mother of God, Theotokos, better known since then as Saint Mary of Grottaferrata. Very likely, the original church was built following necessarily the layout of the Roman villa, up to the point of incorporating a still existing "crypta ferrata" (literally, "iron grotto" or in Italian "grotta ferrata": hence the name of the town, Grottaferrata). During the following centuries, the Abbey underwent several additions and modifications up to the actual medieval-renaissance aspect, but the primeval plan of the church remained substantially the same, although several adjacent pertinent buildings were added, destroyed, modified, and changed altogether with their use. These modifications will be dealt with when needed for the story of the CMG, but in order to understand why, when and how the church was built, it is necessary to go

back in time to when Nilo was still a simple monk and hermit in Calabria, a Theme (province) of the Byzantine empire.

At that time all southern Italy, with the exception of Sicily, belonged to the Byzantine empire, and the religious activities were under the direct supervision of the Patriarchate of Constantinople, and so the liturgy was essentially Byzantine. In addition, Nilo was a cultured member of the Greek community, and as a monk became also an expert amanuensis, especially of religious texts. Because of the advancing Arab menace, he and his fellow monks abandoned Calabria and, after moving to various Abbeys during a period of 51 years enriched with several noticeable events, finally were in sight of Grottaferrata, when he died. His mission was continued by the other monks, and especially his best pupil Bartholomew, also a Saint later on [24], who among several appreciated personal qualities was also a reputed scholar, and wrote the first Typikon [25] of the Abbey and a life of St. Nilo [26].

With the above mentioned background, the monks founded near the very center of the Latin Church, i.e., Rome, a real Greek-Byzantine Abbey where the liturgical ceremonies required also well suitable premises. As a matter of fact, the church of St. Mary of Grottaferrata was built with the altar (bema plus iconostasis) almost towards the east, as much as possible with the existing constraints of the Roman remains, the Nartex perpendicular to the naves, and the imperial door, also beautiful door, leading to the naves and the altar from the Nartex. In short, they built a church complex which was, as much as possible for the medieval time, the rather peripheral location and the limited means, similar to Haghia Sophia in Constantinople [16]. The Byzantine reality in Grottaferrata was so evident that, after the Great Schism of 1054 between Rome and Constantinople, in 1089 the Pope sent the Abbot of Grottaferrata to Constantinople with a diplomatic delegation aimed at re-establishing the unity of the two Churches. To understand the whole story, it is necessary to add that after the Schism the monks of the Abbey remained faithful to the Pope but retained their Greek-Byzantine rites, and the said Abbot, Nicola I, was very likely a Greek from Constantinople [1, p. 30].

Notwithstanding such initial strong bonds between the Abbey of Grottaferrata and the Byzantine world, at least as far as language, culture and rite were concerned, during the late Middle Ages, a process of partial Latinization started to creep and continued beyond 1462, when the religious and temporal government of the Abbey was assigned to a high Latin prelate, usually a Cardinal. This status remained in practice up to 1881, when the Byzantine rite was fully re-established with the nomination of an Abbot, later on Archimandrite, who answered for it directly to the Pope. However, the process of Latinization was also influenced by the decadence of the Byzantine empire in Italy and its ultimate destruction in 1453 when the city of Constantinople, the second

Rome, was taken by the Ottoman Turks. Since that fateful day, not only the Eastern Roman Empire ended at once but also the Byzantine Church ceased to be a reference point for the whole Christianity.

The above mentioned short chronicle is a much needed piece of information for the following discussion where two different hypotheses on the origin of the CMG will be presented in some details.

The first one, H1 from now on, simply derives from considering literally the documentation at disposal. In sect. 3 of this article an epigraph is mentioned telling "In a small chamber adjacent to the chapel of St. Nilo there is the following cross with this inscription: measure of the height of our Lord Jesus Christ taken from the Sacred Shroud". The content of the epigraph (now lost) was fortunately written down together with the sketch of a cross in 1879-83, and referred to a Black Cross embedded in the wall in the preceding century(?). The question mark is original in the Cronache Monastiche [18], because the monk did not know when the Black Cross was fixed in the wall. But today it is known from other documents that the wall where the cross was embedded has been erected in 1627 and slightly restored in 1819. So, the original Black Cross could have be embedded in the wall any time since the 17th century, as it is also suggested by the Apostolic Visit of the bishop Severoli. In addition, the old inscription says that the height of Christ was taken from the "Sacred Shroud", and at a first choice it is logical to think that it referred to the Shroud of Turin. When and how this measurement was taken is not known, but it is likely to have happened after 1578 when the Shroud was brought to Turin, a city much more convenient than Chambéry or Lirey in Savoy, now France, where the same Shroud first appeared in 1353. The only distant connection with this hypothesis found in the documentation was the visit paid by the queen Maria Cristina to the Abbey in 1823, but there is no mention of any reference to the Shroud. The Queen knew of the Shroud very well, because it was a property of her House of Savov since the Middle Ages.

The second hypothesis, H2 from now on, derives from the same history of the Abbey and is much more appealing than the previous one from the historical perspective. However, it requires to move back in time to a few centuries before. The said Black Cross was surely fixed in the corridor of "Il Salvatorello" after the beginning of the 17th and before the middle of the 19th century, but nowhere is told that it was also manufactured at the same time. A fair hypothesis might be that it was already in the original wall and it was removed from there when a new wall was added. Moreover, we cannot avoid the question of why a similar singular cross was in that place. The answer is very simple if the origin of the place is taken in due consideration. Indeed, it was the first burial site of the Abbey. At the beginning the whole area south of the church was dedicated as a cemetery of the monks, and a cross in the external wall of the church in front of

the tombs was a much used symbol, as it is customary still nowadays all over the Christian cemeteries. But the cross in the Abbey could have been a special one, because the monks were Greek-Byzantine, and so they used a cross in the form of the CMs of Constantinople as they culture and liturgy suggested. The CM remained there in the following centuries, also when the old cemetery was very much reduced until it disappeared completely and finally closed and covered by a roof in 1777. That is why now the CM is in a corner with no connection whatsoever to any previous religious function. Moreover, also the memory in the monk community faded away because of the advancing Latinization.

In the Abbey there is also another interesting connection between special crosses, liturgical ceremonies and the architecture of a few premises, which changed accordingly to the need of the times. As we have already said in a previous paragraph, the Narthex has been since the foundation of the church one of its main features, because it was the place reserved for the celebration of practical and symbolic religious functions (akoluthia). Originally it was the place where catechumens and penitents were required to stand while the divine liturgy was going on inside the church, but it also became the very place where solemn processions started from, and where the rites of the Passion and funerals were celebrated. So, it is not a case that a "(probably big) cross" was in the narthex near the beautiful door in medieval times, and the simple fact that it is mentioned in the Typicon, contrary to the lack of mention of the many other crosses existing in the church, testifies that it was a special cross with a specific function. Later on, a small room was opened in the Nartex, which was used to store vestments and vessels for funerals, and a "crocetta" was fixed in the external wall of it. Later on, when the memory of the "crocetta" and its function were completely lost, the presence of this particular cross convinced the monks to excavate the ground in front of it, and tombs were found everywhere, i.e. it was a cemetery. Very likely all these addictions, the small room and the "crocetta" outside it, were made after the old cemetery was no longer in use, well before the 17th century, and a new cemetery was needed. Finally in the first half of the 19th century all these additions were completely destroyed and other structures were built having in mind the Latin liturgy. At this moment, without more documentation about it is not possible to identify the two above mentioned special crosses with a CM, but very likely its knowledge and functions were very much alive in the first medieval community of monks.

5. CONCLUSIONS

As of now, the following information have been found to possess solid historical grounds.

- The present CMG has been made of cemented marble in 1890 and fixed in the same year on the wall of "Il Salvatorello", as it is today.
- Before that, in the same place there was a Black Cross with an epigraph telling that it reproduced "the height of our Lord Jesus Christ taken from the Sacred Shroud".
- The wall where the CMG is fixed, and where the Black Cross was before, was added as a second wall in 1627 to avoid seepages of water on the adjacent frescoes of Domenichino.

So, as far as archival documentation is concerned, a CM may have existed in the Abbey since the 17th century, or even before on the first wall erected anytime between 1088 and 1608. Moreover, other special crosses existed in the Abbey since its foundation, which could have been either CMs themselves or closely related to them at least for their liturgical functions. This last statement is strongly supported by historical events which took place since the 11th century, as in the following.

- 910: Birth of Nicola at Rossano in Calabria, then a province of the Byzantine empire.
- 940-1003: Nicola becomes an hermit and soon after a monk, with the new name Nilo, at Mercourion, San Demetrio Corone, Valleluce and Serperi.
- 1004: Nilo di Rossano dies while approaching Grottaferrata, where he is buried, and his companion monks found the Abbey.
- 1024: Building and consecration of the church to the Mother of God.
- 1054: Great Schism between the Latin and Byzantine Churches.
- 1089: The Abbot of the Abbey Nicola I is sent to Constantinople as an envoy to try to lift the Schism.
- 1163-1191: Escape of the monks to the Benedictine monastery of Subiaco and their return.
- 1453: Fall of Constantinople.
- 1462-1869: A high Latin prelate is appointed by the Pope as head of the Abbey.
- 1870-1878: The new Italian state takes control of the Abbey, which becomes a national monument in 1874 with the monks as its keepers.
- 1879: Nomination of the first full-power Abbot, Giuseppe Cozza-Luzi, and restoration of the Byzantine rite, that is still in use today.

At the times of Nilo, the CM was a well known religious object in Hagia Sophia. Also the Patriarch of Constantinople was well known in southern Italy. Moreover, the abbot Nicola I was a Greek very likely native of Constantinople, and as such he knew the CM and its use in the Byzantine liturgy in Hagia Sophia, for instance in the ceremonies of the Passion and the dead. So, because these initial tight cultural and religious connections, the CM was very likely known in the Abbey, and most probably it had been there since the beginning in places where it was needed for the ceremonies, i.e.

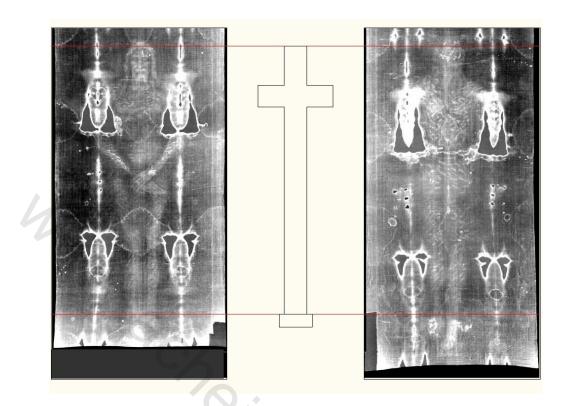


Figure 4. The CMG, center, and the negative photo of the body image front, left, and back, right, of the Shroud of Turin are reported in the same scale. The picture has been taken after the intervention on the Shroud in 2002, when its length was 441,5 cm [28, 29].

Narthex and cemetery. Its ascertained presence since the 19th and, very likely, 17th century in the wall of "Il Salvatorello", is a further proof of its use, because formerly in that place there had been the old cemetery of the Abbey reduced in time and finally moved elsewhere, but not the CM which is still there as a forgotten memory.

Anyway, the simple fact that a CM exists today in the Abbey of Grottaferrata is a proof that it was a well known religious object, which on the contrary was and is practically unknown in the Latin tradition. At this point it is worthwhile to remind that the Abbey of Grottaferrata was and still is a Byzantine island in a Latin sea. It is the opinion of the authors that the first modern Abbot, Giuseppe Cozza-Luzi, may have played an important role in realizing this brief recall of the CM at the end of the 19th century, which also concerned the Shroud of Turin. Indeed, the two hypotheses, H1 and H2, are both pregnant with consequences for the Shroud, as in the following.

According to H1, the CMG has been introduced in the Abbey in the 17th century by a monk of the Abbey or by an eminent visitor, who had an easy access to the Shroud of Turin and the dimensions of the body image of Christ. This fact could have happened only after 1353, or better after 1578.

According to H2, the CMG has been introduced in various forms (for specific functions) since the foundation of the Abbey or soon after in the Middle Ages, and it was

moved to different premises following the many renovations performed during the centuries, until it landed in the 17^{th} century where it is now.

In both hypotheses, the CMG and its liturgical functions have been completely forgotten in the Abbey soon after its inception up to nowadays, with the sole exception of a short revival at the end of the 19th century, when the Byzantine liturgy was revived.

So, as far as the Shroud of Turin is concerned, let us compare it with the CMG. Figure 4 shows an assembly of a high contrast picture of the said Shroud with the CMG. As expected, the body image is longer than the CMG but not that longer, because it should be taken in consideration that the length of the Shroud increased by several cm during his long history, especially after the intervention of 2002 [27,28,29].

Anyway, going back to the previous hypotheses, if H1 holds, it follows that the CMG is 178.4 cm tall as

measured from the Shroud of Turin. On the other hand, the precious CM of Justinian was 180 cm tall. But Justinian measured the height of Christ from the Shroud, or a copy of it or other figurative document in Jerusalem in the 6th century, and therefore his measurement should equal that taken more recently from the Shroud of Turin.

If H2 holds, it follows that the CMG possesses the same height as the precious CM of Justinian which was modeled from the Shroud, or a copy of it or other

figurative document in Jerusalem in the 6th century. But both have the same height as the body image in the Shroud of Turin today.

In conclusion, it results that the body image of the Shroud of Turin possesses the same dimension as that of the Shroud of Jerusalem, so that they may also be the same historical object. Moreover, the CMG gives also the width of the shoulders of Christ which is not reported in any other document existing today. Finally, the CMG may be the only surviving CM still existing in the world, which makes it a very precious historical object, although the material itself is not so precious.

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REFERENCES

1. Antonio Rocchi, *De coenobio Cryptoferratensi eiusque bibliotheca and codicibus praesertim graecis Commentarii*, Tusculi (1883). Edizione Italiana, *Storia e Vicende del Monastero di S. Maria di Grottaferrata*, Traduzione di P. Basilio Intrieri, Tipografia Italo-Orientale San Nilo, Grottaferrata (1998).

2. L'Abbazia Greca di Grottaferrata, edited by Gruppo Archeologico Latino-Colli Albani "Bruno Martellotta", De Luca Editori d'Arte, Roma (2008). Available also in English, German and Greek.

3. Franco Portelli, *L'Abbazia Greca di Grottaferrata*, Cavour Libri s.r.l., Roma (2009).

4. Father Partenio Pawlyk not only remembers the CM but also claims that it is not made of red porphyry, but rather of some different kind of marble, January 2010. He arrived in Grottaferrata on February 3, 1936, when he was 17 years old being born in 1919 at Buzkovice, Ukraine. 5. Gino Zaninotto, *Sindone. Nuovi Contributi e Ricerche: Tabula Puteolana and Crux Mensuralis*, Roma, (1987). Unpublished document.

6. Giulio Ricci, *La Sindone Contestata, Difesa, Spiegata*, Collana Emmaus, Roma, pp. 376-384 (1992).

7. Lamberto Coppini e Francesco Cavazzuti, *Le Icone di Cristo e la Sindone*, Edizioni San Paolo srl, Cinisello Balsamo, Milano (2000).

8. Roberto Volterri, Archeologia dell'Introvabile: Insoliti Itinerari tra i Misteri della Storia, Sugarco Edizioni, Milano (2006).

9. The cross has been shown to a few experts of ancient marbles who after a visual and manual analysis said that it was made by some kind of marble/granite/porphyry.

10. Patristics Greek (P.G.) CXXII, p.1306 (Anonymi, *De Antiquitatibus Cpolitanis*, Liber Quartus, 41).

11. Averil Cameron, *The History of the Image of Edessa*, in OKEANOS, Harward Ukranian Studies, C. Mango and O. Pritsak, Eds., vol. VII, pp. 80-94 (1983). And private communication, March 2010.

12. Hans Belting, An Image and Its Function in the Liturgy: The Man of Sorrow in Byzantium, Dumbarton Oaks Papers, Vol. 34, pp.1-16, p.11 (1980-1981). And References cited therein as: Constantine Porphyrogenitus (emperor 913-959),

13. De Ceremoniis, I.1,1, Bonn ed., 15f (1829); D. I. Pallas, Passion und Bestattung Christi in Byzanz. Der Ritus – das Bild, Miscellanea Byzantina Monacensia, 2, Munich (1965).

14. Biblioteca Mediceo-Laurenziana, Firenze, Pluteo 25, codice 3, f 15v.

15. Carlo Ginzburg, Indagine su Piero, Giulio Einaudi, Torino, p. 75 (2001).

16. Paul Riant, *Exuviae Sacrae Constantinopolitanae Illustratium*, Genevae, p. 220 (1877); (idem, PEREGRINUS, Vol. I, n.61).

17. H. Swainson and W.R. Lethaby, *The Church of Sancta Sophia Constantinople: A Study of Byzantine Building*, Macmillan & Co, London (1894).

18. Barbara Frale, *La Sindone di Gesù Nazareno*, Il Mulino, Bologna, p. 42 (2009).

19. Archivio Abbazia Territoriale di Grottaferrata, *Carteggio dell'Abate Arsenio Pellegrini*, 1890, e *Cronache Monastiche*, 1890.

20. Archivio Monumento Nazionale di Grottaferrata (AMNG), *Miscellanea Rocchi*, fasc. sec. XIX, p.16, Agosto 1877, Atti di Visita del card. Nina, Inventario.

21. AMNG, Monastero di Santa Maria di Grottaferrata, b, IX, fasc. 2, c. 1r.

22. AMNG, Cancelleria degli abati commendatari, Documenta, 2, c. 518v.

23. Biblioteca del Monumento Nazionale di Grottaferrata, Fondo manoscritti, Man. $\Gamma.\alpha.I = Crypt.$ Gr. 210, Typicon of the hegumenos Biagio II (1299-1300).

24. Stefano Parenti, Il Monastero di Grottaferrata nel Medioevo (1004-1462), Pontificio Istituto Orientale, Roma (2005).

25. Germano Giovannelli, S. Bartolomeo Juniore confondatore di Grottaferrata (Studio introduttivo e testi), Badia Greca di Grottaferrata (1962).

26. The Typikon in the Byzantine tradition is a text describing in details the rules and the liturgies in a religious community, in the present case monastic.

27. Germano Giovannelli, S. Nilo di Rossano fondatore e patrono di Grottaferrata (Versione italiana e note a cura dello jeromonaco G.G.), Badia di Grottaferrata (1966).

28. Luigi Fossati, La Sacra Sindone, Editrice ELLEDICI, Torino, pp. 227-228 (2000).

29. Giuseppe Ghiberti, Sindone le immagini 2002 Shroud images, ODPF, Torino, p. 29 (2002).

30. Giulio Fanti, La Sindone: una sfida alla scienza moderna, ARACNE, Roma, p. 29 (2008).