

A Proposal for a Scientific Examination of the Remains of St Mark

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1. Introduction and Background

The only documented investigation of the remains of St Mark the Evangelist in the Basilica di san Marco in Venice that is known took place in 1811, when it was decided to move the remains from a tomb in the crypt to rest in a sarcophagus beneath the high altar in order to protect them from the city's increasingly frequent floods. The transfer was witnessed by Leonardo Conte Manin, who wrote an account of the history of St Mark's tomb, entitled *Memorie storico-critiche intorno la vita, translazione, e invenzioni di san Marco evangelista principale protettore di Venezia* (Historical Monograph concerning the Life, Relocation and Rediscovery of St Mark the Evangelist, Patron Saint of Venice). The first edition was published in Venice in 1815 and a second edition appeared in 1835.

Manin's treatise establishes that the remains recovered in 1811 are very probably those brought to Venice from Alexandria in Egypt in AD 828 by two Venetian merchant-adventurers. This event is known in Venice as the *Translazione*. That it is an historical fact rather than a mere myth is strongly supported by the fact that the removal of the remains is reported by contemporary Alexandrian sources as well as in the Venetian chronicles. For example, Bernard the Monk, who visited Alexandria in about AD 870 records that the body had been taken away from the church of St Mark in that city by the Venetians. Manin describes a lead tablet, found accompanying the remains, which commemorated their installation in the crypt, when the current Basilica was constructed in AD1094.

Nevertheless there have been doubts about the true identity of the corpse and the uncertainty has increased recently with the publication in November 2004 of a new book, which has suggested that there is a possibility that the remains are actually those of Alexander the Great.¹ This book has revealed new evidence, which shows that the tomb of St Mark first appeared in Alexandria at the end of the 4th century AD (see Palladius, Lausiaca History 45) within a decade of the last record of the existence of the corpse of Alexander in the city, which dates to AD 390 (see Libanius, Oration 49.12). Furthermore, there is an accumulation of evidence that the tomb of St Mark in Alexandria was built in the close vicinity of the ruins of Alexander's mausoleum. However, the specific reason for doubt is that several reputable and early Christian accounts state that St Mark's body was burnt by the pagans in the second half of the 1st century AD. These sources include Dorotheus, Eutychius and the Chronicon Paschale (see Patrologia Graeca vol 86, col 59, note; vol 92, cols 608-609; vol 111, col 983). An incinerated corpse would make the mummified body retrieved by the Venetians a forgery.

¹ The Lost Tomb of Alexander the Great, Andrew Chugg, (London, 2004)

There is however another Christian tradition, which suggests that St Mark's body was snatched from the flames by his followers, when the pagans were frightened away by a miraculous storm. All versions of this story are traceable to an anonymous and apocryphal document known as the Acts of St Mark. This document seems to have been composed in Alexandria in the late 4th or early 5th century AD (a copy seems to have reached the Ethiopian church at about this time). It used to be thought that the Passio of St Peter provided evidence for the existence of the tomb of St Mark in the early 4th century. However, it is now known that the relevant part of this Passio was invented by a 6th century hagiographer, who used the Acts of St Mark as his source. Especially since the Acts of St Mark appeared at about the same time as the tomb of St Mark and in the same city, suspicion has been expressed that the Acts were written to help to explain a forged tomb.

These recently revived suspicions regarding the authenticity of the remains are the first reason for considering a fresh investigation of the corpse at the present time. A second motivation is that newly developed forensic techniques have recently reached such a high level of sophistication and accuracy that there is now a high probability that the question of the identity of the corpse can finally be resolved. Furthermore, the potentially crucial historical information bound up in the remains may be extracted and carefully preserved for posterity.

2. The Manin Report

In this section the scant details of the remains of St Mark recorded by Leonardo Manin in his book published in 1815 (and in a second edition published in 1835 – see Figure 1) are reviewed. It is especially important to draw attention to the very limited nature of Manin's information. No image of the remains was provided. Manin did not even record the dimensions nor did he catalogue the remains in any sense.

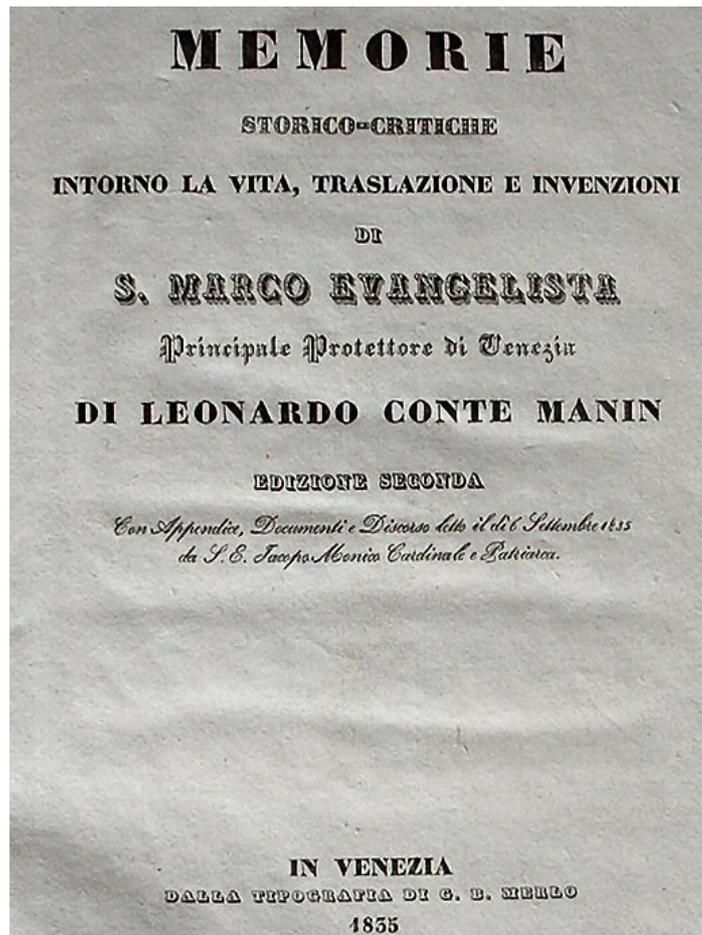


Figure 1. Title page of the book by Leonardo Manin

The most important description of the remains in Manin's book seems to that given on pages 24-25, detailing the opening of the coffin on 9th May 1811. The original text is shown in Figure 2 and a transcription and a translation are given below.

le ossa ritrovate furono nella nuova cassa riposte. Io non mi tratterò a descriver queste minutamente, ma dirò solo, che si vide un capo co' suoi denti fornito, le ossa principali che formano lo scheletro di un uomo, affatto scarnate e disseccate, oltre a molti pezzetti già polverizzati e molta cenere. La cassa era internamente foderata di un manto rosso, e le sante reliquie erano di altro tessuto coperte di un colore più chiaro, e di una solidità maggiore del velo, il quale e dall'umido e dal tempo erasi alle sante ossa attaccato, e di esse quasi un involto formava. Per antico rito e per cristiano costume, come asserisce monsignor Fontanini nella dissertazione sul corpo di s. Agostino (45), soleansi di veli i santi corpi ricoprire, che chiamansi *brandea*, *sudaria*, *oraria*. Questi erano adoperati per rivolgere i corpi

Figure 2. Extract from pages 24 and 25 of Manin's book

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I won't dwell upon describing them in detail, but I'll confine myself to saying that those present saw a head furnished with its teeth, the principal bones which form the skeleton of a man, completely bare and dry, besides many little bits already pulverised/smashed and many ashes. The chest was internally lined by a red mantle, and the holy relics were covered by another hand-weave of a lighter colour and of a greater solidity than veil/shroud, the which was by the humidity and by the time become adhered to the saintly bones, almost forming a parcel. According to antique rites and by Christian custom, as is asserted by Mr Fontanini in his dissertation on the body of St Augustine, they were in the habit of re-covering the corpses of saints with veils/shrouds, which they would call brandea, sudaria, oraria.

The decayed state of the remains reflects the dank conditions in the crypt, which is subject to continual flooding. Clearly, the intact state of the skull and principal bones is highly inconsistent with these remains ever having been cremated. The mention of “ashes” (*cenere*) merely means crumbled organic remains. There is no imputation of burning in the context of human remains.

There are also a few further mentions at later points in the book, which are quoted for completeness below.

P.42, para 2

... e attentamente si è estratto il sacro corpo consistente nel Cranio e varie ossa, ...

... and attentively extracted the sacred corpse consisting of a Cranium and various bones...

P.45, para 2 (re-interment beneath the high altar on 30th September 1811)

... si è aperta la cassa stessa e si è osservato il sacro corpo consistente nel teschio, ossia cranio, ed ossa in parte di uno schelatro già riposte fra bombace. Nella cassa medesima si sono rinchiuse due scatole contenenti delle ceneri prodotte dale ossa e dai veli sfacellati.

... he himself opened the same chest and he observed the sacred corpse consisting of a skull, cranial bones, and partial bones of one skeleton already put back between cotton. In the same casket were shut up two tins/boxes containing ashes produced from the bones and from perished shrouds...

Manin's book also presents some key information concerning other relics found together with the remains of St Mark. For example on pages 26-27 it describes the box illustrated in Figure 3:

On the left, near the place of the Evangelist's head, a round wooden box was found, with a lid in the shape of a cyma reversa (S-shaped moulding in classical architecture) minutely decorated with drawings, but plain and unadorned in its other parts. This box contained some relics wrapped in a silk cloth, more substantial than the others, and, scattered among them, there were ancient silver coins. At first sight it was thought that these relics were some specially precious part of the sacred body itself that time had reduced to dust, of a colour partly ashen-grey and partly dark blood-red; the presence of the coins seemed to show that this was true, and that this part of the sacred body, whichever it was, had been made an object of special devotion. But when the box was more thoroughly observed, some words could be seen in its middle, which, read and examined by signor Counsellor Cavalier Abbot Morelli, late royal librarian, were interpreted by him as ΑΓΙΟΣ ΑΝΤΩΝΙΟΣ, that is sanctus Antonius (Saint Anthony). Since this saint was particularly famous in Egypt, one could infer that the relics contained in the case belonged to him and had been directly transferred from Egypt together with Saint Mark's and that this wooden vase too, whatever it was, had come from Alexandria. This argument was disputed by some malevolent people, who took this discovery as a pretext for discrediting the others, and claimed that it was very difficult to reconcile the idea of Saint Mark with what the box suggested.

The likelihood that the partially obliterated lettering is Greek certainly supports the connection with Alexandria, where it was the principal tongue spoken under the Roman and Byzantine Empire.

These details from Manin's book also alleviate a concern that the body currently beneath the altar of San Marco is not that brought from Alexandria in AD828. There is a semi-legendary report that the Alexandrian corpse could not at first be discovered, when the time came to move it to a new Basilica di San Marco in AD1094. Then on 25th June St Mark's arm is said to have appeared from behind a pillar on the southern side of the building. Some have therefore suspected that the original corpse was destroyed in the fire of AD976 and that it was arranged for a substitute miraculously to appear in AD1094. However, the story seems garbled in its received form, for it is known that the current Basilica is built over the whole site of the original Church of St Mark, which seems to have been demolished in or shortly after AD1063. The story reads more like a manufactured miracle designed to boost lucrative pilgrimages to the rebuilt shrine, in which aim it evidently proved successful.

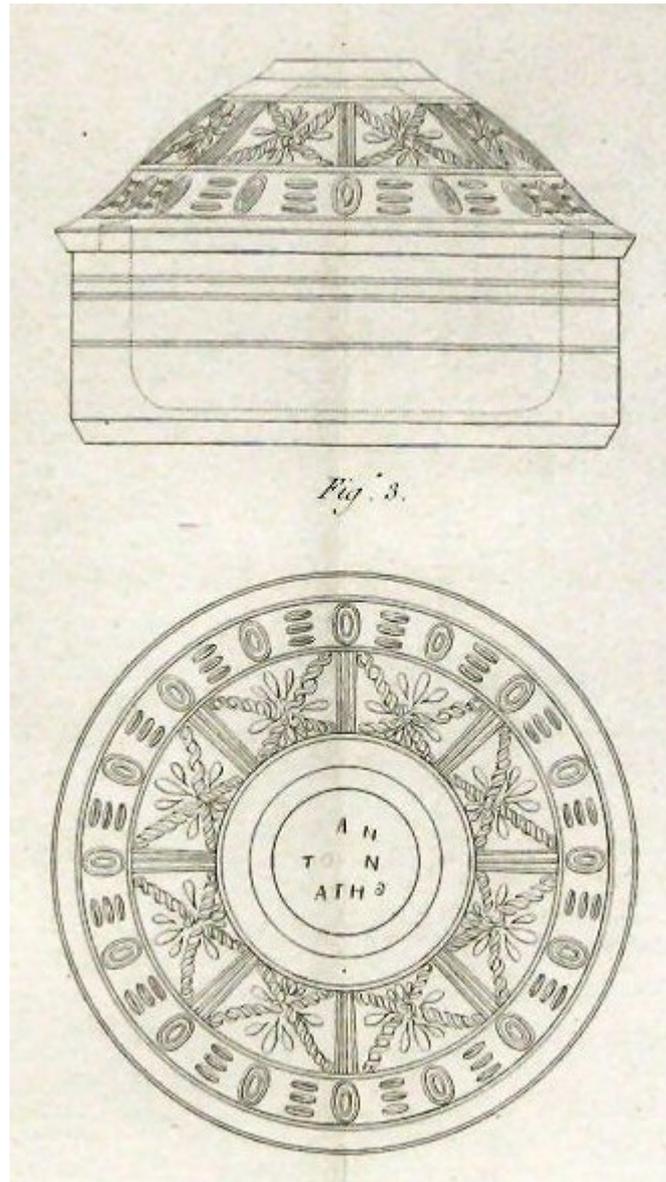


Figure 3. Illustration of a box found with the remains of St Mark (Figure 3 in Plate 5 of Manin's book)

3. Proposed Scientific Test Techniques

The following lists identify some of the tests which are now feasible. Many of them have only recently been perfected, due to great advances in forensic archaeology over the last few decades. The exact range of tests to be performed in an investigation would be a matter for further deliberation and negotiation. The tests have been divided into two categories. The first category includes non-invasive tests that it should be possible to perform without moving the remains and without taking samples from the remains. The second category would probably require that small samples were taken from among the remains or that the remains were temporarily removed to a laboratory.

Category 1, visual examination and inspection

- a) Examination of the remains by an expert should permit confirmation of sex and approximate age at the time of death; it should be possible to determine the original type of preservation of the corpse (Manin's comment that parts of the skeleton were stuck to wrappings may be indicative of a decomposed mummy)
- b) Photographs would record appearance, dimensions and any skeletal marks/scars: Alexander is recorded to have received two wounds that damaged his skeleton; firstly an arrow wound to the lower leg in the vicinity of Samarkand; secondly, an arrow which lodged in his breast bone at a Mallian town in India. These wounds should be visible as healed scars on his ribs or sternum and on a fibula or tibia.
- c) The remains should be catalogued against the photos with weights
- d) Facial reconstruction is feasible assuming the skull is intact as is indicated by Manin (this might be based on photos taken from multiple angles or there exist safe laser beam systems which can record 3D object in detail)

Category 2, advanced test techniques

- a) Radiocarbon (Carbon-14) dating: radioactive carbon generated by cosmic rays is absorbed by living things at a constant concentration, whilst they are alive, but decays away at a steady rate, when they die; by measuring the ratio of radiocarbon to ordinary carbon in an uncontaminated part of the remains, it is feasible to date the time of death to within 50 years; clearly a date in the second half of the first century AD would strongly support the identification of the remains as St Mark; any other date would suggest a forgery
- b) strontium tooth-enamel isotopes; certain measurable isotopic ratios in parts of remains (e.g. tooth-enamel strontium and oxygen isotope ratios) can reveal in which places or regions or climates the deceased lived his life
- c) DNA testing: it may be possible to decipher some of the DNA of the deceased; this would be a rich source of information on the ethnicity and place of origin of the deceased; it might even be possible to identify related individuals alive today. The bones of some of Alexander's relatives (father or half-brother and son) have been found at Vergina in Macedonia. Although they have been cremated, it has occasionally been possible to extract DNA sequences from cremated remains.
- d) X-rays and X-ray tomography: interior and 3-dimensional internal views of the remains may be acquired
- e) spores/pollens etc, perhaps trapped in the wrappings; these may provide clues on places or regions in which the remains have been stored for long periods
- f) The weave, material and dye of the wrappings may provide important clues

4. Motivation and Justification for the Investigation

The combination of new issues regarding the authenticity of the remains with the newly perfected ability of advanced scientific techniques to solve the mystery of their identity will inevitably lead to serious questions being posed to

the Church as custodians of the remains. In this section we review some of the questions and issues which are likely to have to be addressed.

a) Right for the identification of the deceased to be established

It is usually agreed that the dead have a moral right to be identified. Most people agree that they would wish advanced scientific techniques to be used to identify their own remains in the event of any doubt following their death. For example, this argument was recently used to justify the application of sophisticated techniques to identify partially decomposed corpses following the tsunami in the Indian Ocean. As has been explained, there is now a good possibility that the remains of St Mark can be dated and their place of origin can be identified. Many other details relating to the identity of the corpse could also be revealed.

b) The duty of custodians to conserve historically important information contained within relics

The remains of St Mark contain much historically important information, which it is now possible to decipher by applying advanced scientific techniques. The custodians of the remains will be deemed to have a duty to conserve this information to the best of their ability by historians and by the public in general. However, whilst this information lies undeciphered within the remains, it is under continuous threat. Firstly, the slow decay processes of time are continuously corrupting DNA information and causing increased contamination, which will reduce the accuracy of radiocarbon dating and other techniques. Secondly, whilst the information is stored in a single location, it is vulnerable to a single point accident or catastrophe, such as fire or flood (the latter is a special issue in Venice). Once testing were performed, copies of the data could be stored at many locations, rendering the historical information safe from further risk and corruption. How could a decision not to allow the testing be defended in the event of the subsequent destruction of the remains through some accident, attack or other calamity?

c) The ability to reconstruct the face of the deceased

It is now feasible to reconstruct the face of the deceased provided the skull is intact, as Manin asserts to be the case. This was recently performed by three independent teams for the skull of Tutankhamun. All three reconstructions were very similar, demonstrating that the technique is now reliable. If the remains are genuinely St Mark, there is likely to be great interest among the congregation of the faithful in seeing his face. We cannot know the true face of any other great Christian leader from the dawn of the Church. This is a virtually unique opportunity.

d) The right of the world not to be deceived

What if the remains are demonstrably not St Mark? If the Church authorities do not allow tests, they might in future be deemed complicit in perpetuating an ancient lie. Does the Church not stand above all for truth? The Church will be

blamed equally for concealing a forgery or impeding the validation of the true corpse of St Mark, if it refuses to allow a competent investigation.

5. Proposed Organisation of the Investigation

The details of the organisation of the testing would need to be decided through further deliberation and discussion. However, the following points may be proposed:

- a) The investigation could be funded by a TV company (or similar) in exchange for exclusive TV transmission rights
- b) All tests and analyses should be performed by third-party, independent experts and laboratories of high repute (e.g. Oxford Radiocarbon Accelerator Unit [ORAU])
- c) A technical report and datapack should be prepared and a copy should be presented to the Church
- d) A committee with Church members, relevant scientific and historical experts and representatives of other key interested parties should oversee the investigation

6. Conclusion

- A) There are credible reasons, some based in ancient Christian writings, to question the true identity of the remains of St Mark in Venice, but there is an excellent chance that appropriate testing could reveal the true identity of the remains.
- B) It is usually considered that there is an ethical duty to establish the identity of human remains, where there is uncertainty or doubt that may be resolved by appropriate testing.
- C) The remains of St Mark incorporate important historical information, the survival of which is threatened by decay of the remains and the possibility of accidental damage to the remains. Testing will enable extraction and preservation of the information and dissemination will make it safe from further degradation or loss.
- D) Some of the analyses, such as facial reconstruction, may be of religious significance, should the remains prove authentically to be those of St Mark.

Supposing the remains are a forgery, is it reasonable that the world should be kept perpetually in ignorance of the fraud? Supposing that the remains are genuinely those of St Mark, is it reasonable now that techniques exist to prove they are authentic, that the world should be kept perpetually in doubt concerning the identity of the remains? If neither stance is reasonable, then testing should be permitted to proceed. It should also be borne in mind that the healed wound evidence may mean that merely lifting the lid of the sarcophagus will resolve the mystery.

For more details of this matter and a thorough grounding in the topic of Alexander's tomb, see Andrew Chugg's book: *The Quest for the Tomb of*

Alexander the Great: available through most online booksites including www.amazon.com and www.amazon.co.uk.

The Quest for the Tomb of Alexander the Great



Andrew Michael Chugg