

A NEWSLETTER ABOUT THE HOLY SHROUD OF TURIN
edited by REX MORGAN, Author of several books on the Shroud
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Published recently in the US *National Enquirer* this photo is claimed by a nun from Rome, to have been taken by her of an apparition of Christ in the presence of an archbishop. A reader says, "Is this not the face of the Holy Shroud?" No judgement can be made without examination of the original negative and the likeness is very similar to the well known portrait based on the Shroud face by Agemian

EDITORIAL

Since the preparation and publication of the February issue of *SN* I have received many kind enquiries from all over the world, and particularly from *SN* subscribers, as to our personal safety in Sydney and New South Wales following the bushfires of January. From the anxious enquiries I had from many countries it appears that the world media really went to town on this matter irresponsibly creating the impression that Australia was on fire from one end to the other. Although there were extensive and threatening fires in many areas (especially those through which I travel and in which I live) and there was some loss of property, there was minimal loss of life and most of the fires took place in wilderness areas. One of the reasons advanced for the inability of firefighters to contain them was the effort of greenies to prevent proper fire trails being constructed in recent years.

Shortly after that we had the pleasure of welcoming Ian Wilson with his wife Judith on their first visit to Australia during which they visited my home in Bathurst. Amongst other things we were able to show them through our telescope and prompted by another English Shroudie, Dr Michael Clift, the heavens of the Southern Hemisphere free of pollution laden air of most cities.

Although these days, on grounds of pressure of agenda and a few percentage points down on health, I have greatly reduced my lecturing on the Shroud, I did give two recently. One, to a Masonic Lodge, was a great success after which their letter of thanks generously said, "Never have I observed a speaker followed with such rapt attention by an audience not normally renowned for restraint in interjection." The other was to a large gathering of the distinguished Sydney Probus Club. Through a misunderstanding I showed NO slides. The thought of speaking about the Shroud, such a highly visual subject, without a slide show, is an awesome challenge but my word pictures must have worked: their letter of thanks said that the audience was spellbound. So there we are, fellow lecturers, it can be done without slides.

The response to our publication of Lennox Manton's fine paper *Byzantine Frescoes and the Turin Shroud* has been extremely encouraging. Indeed, it inspired one subscriber in the United States to send his subscription up to and beyond issue No 100. This is real optimism. And despite the exigencies of this transient life I must also take the supremely optimistic view. Whether or not *SN* survives there is no doubt in my mind, as I receive more and more information and reports of new research on the Shroud, that the study of this remarkable object will certainly outlive its current (yet somewhat quieter?) critics and its uninformed discrediting by the world media.

REX MORGAN

12 REASONS WHY I CANNOT ACCEPT THE CARBON-14 TEST RESULTS ON THE HOLY SHROUD OF TURIN

- **Victor de Vincenzo (USA)**

Amidst all the controversy that has plagued Shroud of Turin research and discussion since the announcement in October, 1988 of the Carbon-14 test results, popular focus has been unfortunately diverted from the extraordinary and demonstrably miraculous qualities and characteristics of the Holy Shroud which make it the unique and holy object that it is. It is as if one test result, utilizing a method of determining ages that is based on highly subjective assumptions, and which has been known to be erroneous,^{1, 2, 3} is enough to cancel out the results of hundreds of other scientific tests whose results are in direct opposition to the Carbon-14 interpretations. For my part, I cannot follow such a dubious path. There is simply far too much evidence on the positive side of the authenticity balance to discard the Holy Shroud because of one element on the negative side.

Moreover, there are several factors which call into serious question any definitive interpretation of the 1988 Carbon-14 test results.⁴ First of all, the agreed-upon protocol of a blind test of samples was surreptitiously abandoned by the scientists at the three laboratories.⁵ This alone is enough to discredit the results since the failure to follow agreed upon protocol procedures invalidates any scientific test. Secondly, there were discrepancies in both the size and weight of the samples which were removed from the Holy Shroud as compared to the samples which were actually tested by the laboratories.⁶ Indeed, M. Tite's secret possession of a 14th century linen sample at the time of the cutting of the samples from the Holy Shroud raises serious questions about both his integrity and his motives.⁷ We also ought to keep in mind that the rapid acceleration method of carbon testing used in the 1988 tests has been known to lead to errors in dating,⁸ and is based on assumptions about the inviolability of the decay rate of carbon-14 which may, or may not, be true in the presence of an unknown energy such as would have accompanied the Resurrection. All that a Carbon-14 test can do is to measure the ratio of carbon-14 atoms to carbon-12 atoms in a given sample. An age estimate is then attached to this ratio based on a whole host of unproved assumptions. It should be noted that we know for certain that the Holy Shroud was in a fire in 1532, and that 16th century nuns did, in fact, sew threads into the Holy Shroud so artfully that their weave into the original

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linen is difficult to detect. Both of these factors could have serious consequences for any Carbon-14 test results.⁹ Had Carbon-14 testing never been found in error I might attach more importance to it than I do. However, given the fact that it has been found to give erroneous results on several occasions (Leakey, for example, threw out the initial Carbon-14 test results on his famous skull 1470 because they were completely erroneous), I much prefer to rely on hard evidence, such as photographs (cameras make no assumptions), chemical tests made on actual materials from the Holy Shroud, and microscopic examinations of actual Shroud fibers.

Unlike Tite and Hall, the 1988 test organizers who referred to the Holy Shroud as a forgery and "His Nibs" before the Carbon-14 test results were even calculated, I place no *a priori* limitations on my approach to the Holy Shroud. In my view, I remain completely open to the possibility that if God wanted to leave us a miraculous quasi-photograph of His Resurrection from the dead, He is as presumably capable of doing so in the 14th century as He would have been in the 1st. Nor would the miraculous production of a Divine image at a later date be without precedent. The Holy Image of Guadalupe was spontaneously produced in the presence of Bishop Zumarraga and Juan Diego in Mexico City in 1531.¹⁰ The Image is clearly of the Blessed Virgin Mary who was admittedly not present in this dimension in 1531. The lapse of some 1500 years did not present any insurmountable obstacle to God in 1531 nor, I submit, would it have been insurmountable for Him in the 14th century. The main issue of the Holy Shroud is not WHEN it was produced but HOW. If the Holy Shroud is demonstrably not the product of human hands, then it is a miracle, and the question of when the miracle was performed is far less important than the reality of the miracle itself.

My skepticism with respect to the 1988 Carbon-14 test results is confirmed by the fact that a secret 1982 Carbon-14 test of a sample thread from the Holy Shroud conducted in the United States yielded results totally different from those claimed by Tite and Hall in 1988, and, in fact, dated one part of the Shroud thread to the 1st century.^{11,12} This raises huge questions relative to the published 1988 results, and, in addition, brings into serious doubt the entire method of trying to date the Holy Shroud by Carbon-14 testing.

My continued reverence for the Holy Shroud as an authentically miraculous object is based on the twelve lines of evidence that I have listed below. These evidences in favor of authenticity are the cumulative results of hundreds of tests performed by many different scientists. My

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hope is that investigators of the Holy Shroud will satisfy themselves with respect to the twelve lines of evidence listed below before reaching any conclusions regarding the authenticity of the Shroud of Turin. In my view, they establish beyond reasonable doubt that the Holy Shroud was NOT the product of human hands. Given this conclusion, some Force beyond humanity must have been responsible for this miraculous image of Jesus Christ encoded into the linen fibers of the Holy Shroud. The twelve lines of evidence that I find most convincing are as follows:

1. THE ABSENCE OF ANY PAINT, PIGMENT, STAIN, OR DYE ON THE SHROUD IMAGE AS REVEALED BY BLOW-UP PHOTOGRAPHY.

The Shroud Image is thus NOT the result of human hands or art. The photos reproduced by Stevenson and Habermas in *Verdict on the Shroud* (Servant Books, 1981) are especially convincing in this regard.¹³ They clearly show that no paint or coloring agent is added to, or coated on, the image fibers. I am convinced that no paint means no artist.

2. THE SUPERFICIALITY OF THE IMAGE FIBRILS.

Only the top two to three fibrils of the top thread of the linen, in the image area are yellowed by dehydration and oxidation. These yellowed fibrils cumulatively constitute the image of Christ that becomes apparent only when one examines a photographic negative of the Holy Shroud. There is no human hand or brush ever known which could possess so light a touch as to affect only the top two to three fibrils of a thread and never go any deeper. It is an absolutely impossible task for any artist to take on, nor would any hypothetical medieval forger ever even conceive such a task since only photography could reveal such superficiality and photography was unknown in the Middle Ages. Moreover, each Image fibril is yellowed/oxidized by exactly the same amount as revealed by the microdensitometer tests conducted by STURP in 1978.¹⁴ This also defies human explanation. Not even a computerized printer could achieve such absolute exactness of touch, such uniformity of dehydration, and such superficiality of effect.

3. THE SHROUD IMAGE IS THE RESULT OF PERFECTLY ENCODED 3-D ANATOMICAL INFORMATION ENCODED INTO THE UNKNOWN PROCESS WHICH OXIDIZED AND DEHYDRATED THE UPPER 2 TO 3 FIBRILS OF THE TOPMOST LINEN THREAD.

This, to me, is the most amazing and miraculous Shroud characteristic of all, and it was not discovered until John Jackson subjected photos of the Shroud to the VP-8 Image analyzer in 1976.¹⁵ The Holy Shroud is absolutely unique and totally beyond the reach of human art

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in this regard. No one has ever been able to even imagine a process that could encode perfect 3-D information of a human body into the top 2 to 3 fibrils of a linen thread. In other words, the de-hydration and oxidization of the top 2 to 3 fibrils of the top thread was done in some mysterious manner such that a perfect 3-D image of a man was coded into the fibrils themselves in a perfect cloth-to-body intensity. Not only is it impossible for a human hand to achieve such 3-D perfection, no camera lens ever made is even capable of doing it as Jackson's tests revealed. Try to imagine a 14th century forger saying to himself, or herself, "I had better be sure to encode perfect 3-D cloth-to-body anatomical information into my image-producing oxidation process because some day photography will be invented and they will be looking for such a fully detailed effect. This is the kind of speculative nonsense that you must indulge in if you accept the results of the 1988 Carbon-14 test interpretations.

4. THE TOTAL LACK OF ANY CEMENTING OR BONDING ELEMENT BETWEEN IMAGE FIBERS.

STURP scientists separated Image fibrils with needles and found under microscopic examination that there was nothing - no paint, no stain, no dye - bonding them together.¹⁶ Had any form of human artistic material been used traces would have remained between the Image fibrils. No conceivable artistic process could leave no trace of bonding material between fibers, nor is it possible to apply paint remover in a microscopic fashion to remove material between fibrils. The absence of artistic material between fibrils means the absence of human hands in the unknown Image-producing process.

5. LIGHT/DARK REVERSAL.

The Holy Shroud Image, in addition to miraculously encoding 3-D cloth-to-body anatomical information within the unknown de-hydration process, also exhibits a complete reversal of light and dark as if it were a photographic negative.¹⁷ This unprecedented quality only became known when Secondo Pia photographed the Holy Shroud in 1898, and discovered to his total surprise that his photographic negative revealed the positive image of a crucified man with minutely accurate anatomical details none of which are visible when one looks at the Holy Shroud in person. Not only was photography inconceivable in the 14th century, but it has never occurred to any artist before or since to paint, or stain, in a light/dark reversal pattern since such a project is totally beyond the capacity of the human eye or hand. Nor would any medieval artistic forger have any

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motive to undertake such an impossible task since photography was unknown. In addition, there are no brush strokes on the Shroud Image, no under-drawing, and no directionality to the Image fibrils. This is extremely strong evidence that, given these extraordinary characteristics, coupled with the absence of paint, stain, or dye on the Image fibrils, no human being produced the Holy Shroud. Isabel Piczek, a professional artist, has confirmed that no human artist could have created the Holy Shroud Image.¹⁸ It is physically impossible for any human eye to exactly reverse light and dark in a precise match of a photographic negative such as is exhibited by the Shroud Image. Nor, it must be emphasized, would it occur to any hypothetical medieval forger to even try to do so since photographic negatives were not even dreamt of in the 14th century.

6. THE BLOOD STAINS ARE COMPOSED OF REAL BLOOD.^{19, 20}

This astounding result was established by the chemical tests conducted by J. Heller and A. Adler on Shroud blood-coated fibers and it has been confirmed by other independent researchers.²¹ When one considers the total inutility of blood as an artistic medium, and the lack of refrigeration available in the Middle Ages to preserve blood, it becomes extremely difficult to imagine a 14th century artistic forger using human blood to paint on linen. In addition, our imaginary super-human artist would have had no motive for taking on such an impossible task since none of his, or her, contemporaries would have had the knowledge or equipment necessary to realize that he, or she, had somehow used real blood. Once again, our proponents of a medieval forgery explanation for the Holy Shroud Image would have us believe that their hypothetical forger said to himself, or herself, "I had better use real human blood in all blood-stain areas because one day (after the circulation of blood is discovered) scientists are bound to develop blood chemistry tests and apply them to the Shroud." The reality is that nothing was known in the 14th century about blood chemistry or even blood circulation.

7. THE BLOOD STAINS WENT ONTO THE CLOTH BEFORE THE BODY IMAGE IN A MANNER TOTALLY BEYOND THE CAPABILITY OF HUMAN ART.

The blood-stained fibers are NOT superficial as the dehydrated/oxidized Image fibrils are, but rather go straight through the cloth as we would expect real blood to do. More importantly, there are no yellowed/de-hydrated fibrils under the coating of blood. Thus, when STURP scientists removed the blood particles from the linen fibers in the course of their many and varied chemical tests, the fibers themselves, under the blood particles, were not yellowed, or discolored, at all.²² As a practical matter, this means that there is no Image of the Body under the

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blood stains. As a consequence, the blood stains must have gone on the cloth first in a normal process of seepage and oozing from a human body, and then the Body Image must have been formed later with a completely separate, unknown process utilizing a de-hydrating/oxidizing energy which somehow, inexplicably encoded cloth-to-body 3-D anatomical information. Can anyone imagine this to be the product of human art? Can anyone honestly imagine an artist painting blood stains with real human blood first (replete with serum albumin halo outlines invisible to unaided sight), and then painting a body (without paint no less!) around the blood stains without benefit of a preliminary drawing? Moreover, the blood clots are intact (not smeared) with, as previously noted, serum haloes having separated out by gravity around major wounds as revealed by microscopic examination. The fact that the blood stains went on the Shroud first is consistent with the Resurrection narratives, but is totally inconsistent with the medieval forger hypothesis. Our unknown artist begins to sound more and more like God.

8. SERUM HALOES.

Microscopic serum albumin haloes are evident around each of the scourge wounds, and are clearly visible to the naked eye around major wounds.²³ The serum albumin haloes around the scourge wounds can be seen in the ultra-violet light photographs made by Vern Miller for STURP which I was privileged to view in person. The haloes were tested positively for serum albumin by Heller and Adler.²⁴ These haloes are so tiny, and so perfectly formed around the outline of each scourge wound, that they are totally beyond the reach of any human being to produce even if he, or she, had microscopic brushes in the 14th century (which they didn't), and even if they knew what serum albumin was (which they couldn't)! When one thinks seriously about the impossibility of applying serum albumin as a minutely accurate border around each scourge wound, particularly in an era which did not even know that serum albumin existed, one is forced to conclude that this line of evidence alone establishes the Holy Shroud as a miracle beyond human capacity.

9. EVIDENCE OF RIGOR MORTIS.

There are clear evidences of rigor mortis in the Shroud Body Image as seen in the forward head lean, the rigid leg positions, and the unextended thumbs. These clear evidences of rigor mortis were discerned in enlarged photographs examined by Dr. Robert Bucklin and Dr. Frederick Zugibe.²⁵ European researchers have confirmed these signs of rigor mortis. It is hard to imagine more convincing evidence than this that a real body was under the Shroud linen cloth at the time that an unknown force resembling radiant heat energy imprinted the perfectly accurate 3-D image of Christ as it apparently de-materialized through the cloth.

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10. PRESENCE OF PALESTINIAN POLLEN GRAINS ON THE HOLY SHROUD.

Pollen grains from 38 plants which grow exclusively in Palestine have been identified on sticky tape samples taken from the Holy Shroud by Max Frei in 1976.²⁶ No medieval artist could have known what microscopic pollen from Palestine was, let alone somehow place them on the Holy Shroud just in case future centuries saw the discovery of microscopes, pollen comparisons, and blow-up photography. Moreover, none of the pollen grains examined by Frei, or any later researchers, had any coating whatsoever of paint, stain, dye, or any other artistic material. Were the Holy Shroud an artistic forgery at least some of the pollen grains should show traces of the artistic material used.

11. PRESENCE OF PALESTINIAN CALCIUM CARBONATE/ARAGONITE ON THE HOLY SHROUD.

Microscopic specs of calcium carbonate/aragonite endemic to the Jerusalem area were found near the feet of the Holy Shroud Image by Sister Eugenia Nitowski and Dr. J. Kohlbeck.²⁷ No hypothetical medieval forger could have known what calcium carbonate/aragonite even was, let alone have the ability to leave microscopic specs of it near the feet, of the Shroud Image in an era before microscopes were invented. Moreover, the chemical similarity of the aragonite samples taken from the Shroud with samples taken from areas in, and around, Jerusalem places the Holy Shroud at the very scene of the Crucifixion. This is an important link in the chain of evidence leading toward the authenticity of the Holy Shroud.

12. THE SELF-EVIDENTLY HUMAN SHROUD FACE.

My twelfth reason for rejecting the interpretations placed on the 1988 Carbon-14 test results is admittedly subjective, but none the less convincing for all that. My twelfth reason is the incomparably human Face of the Shroud Image hidden from all viewers until the art of photography was invented. The Shroud Face as revealed in photographic negatives taken of the Shroud itself is undeniably human and majestic. I invite everyone to try their own simple test. Contemplate the Shroud Face as revealed by photographic negatives printed in any of the popular books on the Shroud for 5 uninterrupted minutes. Then please ask yourself if you have ever seen any painting or statue, made by even the most gifted human hands, to compare to its self-evident humanity and reality? I must confess that I have not, and I am fully confident in my ability to discern the difference between a painted, or sculpted, human face and a real human face. There is no doubt in my mind whatsoever that when I look at the Shroud Face I am looking at a real human being. Although such a vision

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test is hardly scientific, it has at least the pragmatic value of involving one's own eyes and one's own judgement without the hindrance of clandestine data deliberately obfuscated by scientists jealous of their own territory. If you cannot trust what you see with your own eyes, how can you possibly trust the data of faceless scientists gathered when you were not present? Truly, for me, seeing is believing when I contemplate the Shroud Face.

There are many other lines of evidence supporting the authenticity of the Holy Shroud, such as the image of a Tiberius Caesar *lepton* coin minted in the reign of Pontius Pilate over the right eye discovered by the late Father Filas and Dr. A. Whanger and confirmed by two independent image-analysis laboratories, but I have restricted myself to the twelve lines of evidence which are easiest to comprehend even for someone who has very little experience with the Holy Shroud. Taken together, these twelve lines of evidence constitute for me a compelling case for the authenticity of the Holy Shroud of Turin. I do not pretend to know how, or when, God produced this miraculous image, but I am forced to conclude that no human hand did it - its only signature is the fingerprint of God. And, in the final analysis, this is enough for me.

FOOTNOTES

1. Marino, Joseph, "Another Radiocarbon Dating Anomaly," Sources for Information and Materials on the Shroud of Turin, (March, 1992), p. 5.
2. Paci, Stefano M., "The Case is NOT Closed," 30 Days in the Church and the World, (June, 1990), p. 37.
3. Marino, Joseph, "The Shroud of Turin and the Carbon 14 Controversy," Fidelity, (February, 1987), pp. 37-38. Marino quotes noted Carbon-14 testing expert Dr. H. Gove, who described the Holy Shroud 1988 C-14 test dating as "a rather shoddy enterprise ... which the British Museum may live to regret."
4. Professor J. Tyrer as quoted in Ian Wilson's, "The Carbon Dating Results: Is this Now the End?" British Society for the Turin Shroud Newsletter, No. 20 (October, 1988), pp. 2-16. Professor Tyrer: "Bearing in mind the thermal history of the Shroud and the folded way in which it has been stored, carbon dating procedures would seem an unsuitable way of assessing its age."
5. Marino, Joseph, "Shroud of Turin and the Carbon 14 Controversy," Fidelity, (February, 1989), p. 38. See also The Catholic Counter-Reformation in the XXth Century, No. 220, (June, 1909), pp. 25-34.
6. Bonnet-Eymard, Bruno, The Catholic Counter-Reformation in the XXth Century, No. 223 (September-October, 1909), pp. 29-46.
7. Petrosillo, Orazio, "Clandestine Sample," Il Messaggero, March 26, 1909.
8. Van Oosterwyck-Gastuche, Dr. Marie Claire, Sources for Information and Materials on the Shroud of Turin, (January, 1992), pp. 4-6. Dr. Van Oosterwyck-Gastuche observes: "This gathering (the Symposium on the Shroud of Turin, Paris, September 7-8, 1989) showed radiocarbon dating to be a not wholly reliable method of dating, producing many examples of dates qualified by the "apparent", or described as outright "aberrant", because of frequent substantial differences from the archaeological date. Such discrepancies were often associated with the radiocarbon possibly having been affected by the migration of fluids. The Symposium raised again the problem of the spread of the Shroud's radiocarbon dates as

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- published in Nature together with the anomalies in the statistical analysis. It suggested that such heterogeneous dates were simply "apparent" dates as a result of the radiocarbon having been affected by fluids under high temperature and pressure as in the case of the fire of 1532 ..."
9. Marino, Joseph, "The Shroud of Turin and the Carbon 14 Controversy," Fidelity, (February, 1989), pp. 36-37.
 10. See Johnston, Frances, The Wonder of Guadalupe, Tan Books and Publishers: Rockford, Illinois, 1981. See also, Wahlig, Dr. C.J., Juan Diego, Franciscan Marytown Press: Kenosha, Wisconsin, 1972. See also, Smith, Jody B., The Image of Guadalupe: Myth or Miracle? Image Books: Garden City, N.Y. 1984.
 11. Meacham, William, "Turin Shroud Dated to 200 - 1000 A.D. in Secret Testing", Press Release of October 14, 1988.
 12. In a phone conversation On 3/30/90 with the late Father Peter Rinaldi, one of the most knowledgeable Shroud experts who ever lived, he assured me that he knew of the secret 1982 Carbon-14 test conducted in the U.S.A. which dated the Holy Shroud sample "much older" than the 1988 test results. Father Rinaldi was also disturbed by the inconsistencies of the 1988 results as published in Nature in 1989. The Arizona and Switzerland lab dates gave a later age (late 14th century) than the final published results. The Oxford lab dates came in late and conveniently low enough to skewer the average of the three labs to an early 14th century date instead of a late 14th century date. Had the Oxford lab been consistent with the other two labs, the late 14th century results would clearly have made the whole procedure erroneous since we know that the Holy Shroud had to have been in existence in the early 14th Century since it was exhibited in 1340 in France.
 13. Stevenson, Kenneth E. and Gary R. Habermas, Verdict on the Shroud, Banbury Books: Wayne, Pennsylvania, 1981. See especially Plates 4,6,10, and 19 in this edition. See also: the abstract preface to "A Comprehensive Examination of the Various Stains and Images on the Shroud of Turin", by John P. Jackson et al. in Archaeological Chemistry III, (1984) These authors note as follows:
 "No evidence was found in the body image of any added substances that could have contributed to the yellow color of the fibrils that form the image." On p. 455 of this article the authors add:
 "Finally, microchemical tests, mass spectroscopy, and laser-microprobe, Raman spectroscopy all fail to show the presence of any added materials on the yellow body-only image fibrils to within their limits of detection. We conclude that no material has been added to these yellowed fibrils to produce their color."
 14. Jackson, John P. et al., "A Comprehensive Examination of the Various Stains and Images on the Shroud of Turin," ACS Advances in Chemistry, No. 205, Archaeological Chemistry III (1984), p. 451.
 15. Stevenson, Kenneth E. and Gary R. Habermas, Verdict on the Shroud, Banbury Books: Wayne, Pennsylvania, 1981. pp. 63-64, 67, 69, 71-72.
 16. Heller, Dr. John H., Report on the Shroud of Turin, Houghton Mifflin Co.: Boston, 1983, p. 113.
 17. Stevenson, Kenneth E. and Gary R. Habermas, Verdict on the Shroud, pp. 56-57.
 18. Piczek, Isabel, "The Technique of Encaustic (Punic) Wax Painting: Why the Turin Shroud Could Not be an Encaustic Painting," Sources for Information and Material on the Shroud of Turin, Christmas, 1990, pp. 1-2.
 19. Heller, J. H. and A.D. Adler, "A Chemical Investigation of the Shroud of Turin," The Journal of the Canadian Society of Forensic Science, Volume 14, No. 3 (1981), pp. 81-100.
 20. Jackson, John P., et al., "A Comprehensive Examination of the Various Stains and Images on the Shroud of Turin," ACS Advances in Chemistry No. 205, Archaeological Chemistry III, (1984), pp. 458-462.

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21. Bollone, P.B. and Maria Jorio, "Identification of the Group of the Traces of Human Blood on the Shroud," Shroud Spectrum International, Vol. 2, No. 6, (March, 1903), PP. 2-6.
22. Heller, Dr. John H. Report on the Shroud of Turin. Houghton Mifflin Co.: Boston, 1983. p. 103. As Dr. Heller notes on p. 183:

"We made up a solution of powerful proteolytic enzymes. Enzymes are biological molecules that make the body function. Proteolytic enzymes attack and destroy proteins. Meat tenderizers contain such enzymes. Taking control fibers, we added gelatin in various concentrations down to 0.01 percent and impregnated the fibers with it. They gave, of course, a positive protein test. We added the enzymes and waited until they had done their thing and then retested the fibers. As we expected, they were negative. We exposed the honey-coated serum-clad fibers from a bloodstain area to the enzymes, which destroyed the serum proteins, leaving a CLEAN fiber that looked like the off-image fiber. Then straw-yellow image fibers were placed in the enzyme solution. They remained straw-yellow. This was simply another confirmation that there was no "aged protein" responsible for the color of the images."

23. Ibid., pp. 185-186. In view of the extreme importance of this research data to the case for the authenticity of the Holy Shroud, Dr. Heller's observations need to be quoted:

"I return to the testing. In Colorado Springs, Vern Miller had brought a large number of beautiful scientific photographs taken in Turin. Those taken by ultraviolet were most illuminating. At the margin of each scourge mark there was a pale white fluorescence that could not be seen in white light. It is typical of a lesion made by a whip that there will be an ooze of serum at the edges of the wound. Anyone who has skinned a knee will be familiar with this fact. There was a similar white fluorescence around the margin of the heavy blood flows. This, too, is physiologic. As part of the blood-clotting mechanism, the clot retracts after a while, squeezing out serum. The fibrils from these white fluorescent areas showed a positive test for protein by fluorescamine and by enzymatic test. We followed this up by using still another determination, Bromocresol green, which gave us a positive test for Albumin, the main proteinaceous component of blood. Thus, we could conclude that what was on the Shroud was whole blood. Microscopic amounts of blood were present as flakes, dots, blobs, and one other form that was interesting. Where the blood had coated fibrils and hardened, it had in many cases cracked off. These elongated, half-tubular replica casts of fibers we called shards, since they looked like half-round roof tiles. We took specimens of the various types of blood shapes and did still another series of tests for blood, using potassium cyanide in ammonium hydroxide. This produced a positive result, giving the typical color of cyanomethemoglobin. We had noted that some of the shards had a greenish-brown color, which suggested to us that they might contain bile pigments; these are among the decay products of hemoglobin. We ran a specific assay, which gave us a characteristic blue-azobilirubin color. when acid was added, this became a paler purple and was discharged with UV light, giving still one more positive test for blood.

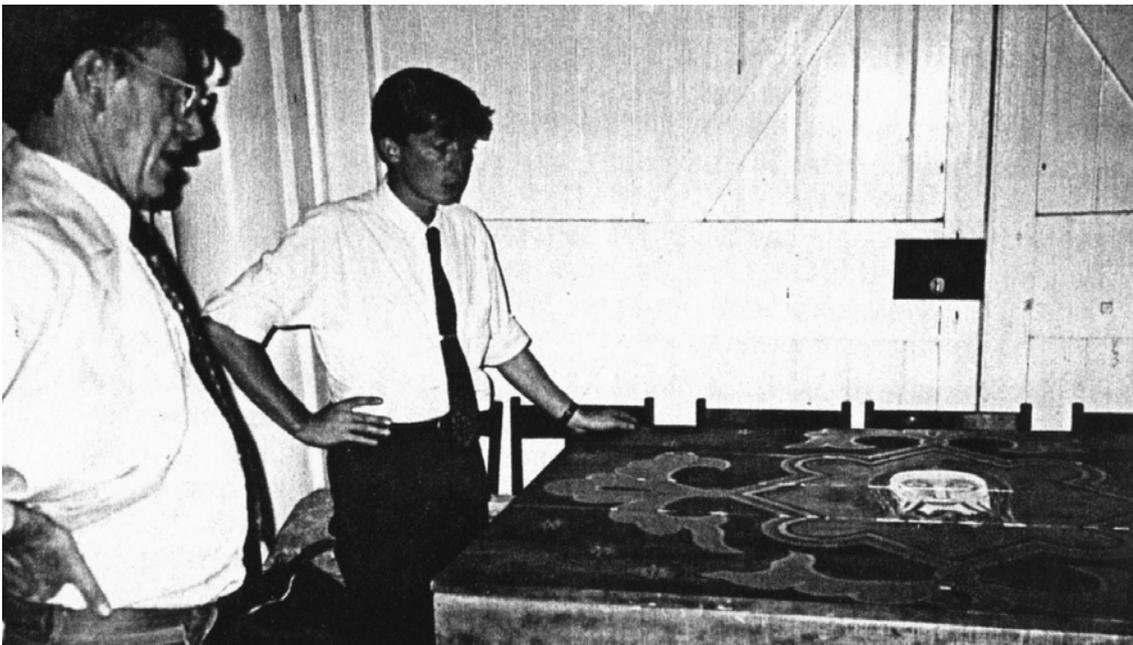
Thus far, our positive blood tests had included (1) microspectrophotometric scans of crystals and fibrils, (2) reflectance scans on the Shroud, (3) positive hemochromogen tests, (4) positive cyanomethemoglobin tests, (5) positive tests for bile pigments, and (6) characteristic heme porphyrin fluorescence. Any one of these is proof of the presence of blood, and each is acceptable in a court of law. Taken together, they are irrefutable." See also: Jackson, John et al., "A Comprehensive Examination of the Various Stains and Images on the Shroud of Turin," p. 454. See also: Stevenson and Habermas, Verdict on the Shroud, p. 79.

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24. Heller, Dr. John. Report on the Shroud of Turin., p. 186.
25. Bucklin, Robert M.D., "Postmortem Changes and the Shroud of Turin," Shroud Spectrum International, Vol. 4, No. 14, (March, 1988), pp. 3-6.

See also: Lecture delivered by Dr. F. Zugibe at the Holy Shroud Symposium held at Columbia University on Saturday, March 2, 1991

26. Bulst, Werner S.J., "The Pollen Grains on the Shroud of Turin," Shroud Spectrum International, Vol. 3, No. 10 (March, 1984), pp. 20-28.
27. Kohlbeck, J.A. and Eugenia L. Nitowski, "New Evidence may Explain the Image on the Shroud of Turin: Chemical Tests Link Shroud to Jerusalem," Biblical Archaeology Review, Vol. XII, No. 4, (July-August, 1986), p. 23.



During a recent visit to Australia, English author, Ian Wilson, there to promote his new book about the life of Shakespeare, found time to visit Rex Morgan's home in upcountry Bathurst, New South Wales. Wilson, an art historian, found great interest in some of Morgan's collection of paintings but here he is discussing with Christopher Morgan, the reproduction of the theoretical wooden box of the Templecombe Templars constructed by Rex and Christopher. Wilson first drew attention to the remarkable painting on wood in Templecombe, England, and demonstrated that it was copied from the Shroud face and probably brought there by the Templars in the time of de Charny. Subsequent research by Morgan led to his paper on the speculation, first conceived by Audrey Dymock Herdsman, that the wooden panel is, in fact, the lid of a great box perhaps used to house the Shroud when it was in England early in the fourteenth century - the speculation of Rex Morgan's papers delivered at the Shroud symposium in Bologna, Italy in 1989 and in St Louis, Missouri, USA in 1991.

JESUS MADE KOSHER

- John A. Schulte, USA

(This article taken from *Shroud Sources*)

Adam and Eve chose not to do the will of God. Death was the result of their sin. God the Father, pleased with the faith of Abraham, chose Abraham's descendants as the channel through which mankind would be redeemed. Every informed Christian knows that he was redeemed by the sacrificed blood of Jesus the Messiah; and without that blood and agony no redemption would have come. "Remember" wrote St Peter to his early pagan converts, that the ransom paid to free you from the useless way of life which your ancestors handed down, was not paid for in silver or gold but by the priceless blood of the Divine Lamb, namely, the Messiah Jesus." (1 Pet. 1:18).

In Christian thought and belief the so-named "Kosher" rules of Jews today about draining all blood from the meat they eat, refer symbolically to the blood of the Messiah poured out to the last drop from His agonized body on the cross for the redemption of all.

This symbolic draining of blood of animals, followed by devout Jewish people, can be found in the Book of Leviticus, Chapter 17, as follows:

"If any man of the House of Israel...eats blood of any kind, I will set my Face against him and will outlaw him from his people. The "life of the flesh (body) is in the blood, (and) I Myself have given you this blood to perform the rites of atonement for your lives at the altar: for, it is the blood that atones for a life."

Religious Jews are still draining animal blood symbolically. The Rev. Arthur Klyber described that he once watched as a slaughterhouse rabbi killed cattle for sale to Jewish butcher shops. "The rabbi draws a very sharp knife across the throat of the animal which is hanging by its hind legs; the animal hangs there until all its blood has drained out." In the shop, the Jewish butcher removes the veins from the beef to dispose of any lingering drops of blood. More than that, the Jewish housewife who later buys the koshered meat, salts it down overnight to extract scrupulously every suspicion of blood that still might be in it. In the process of this slaughter, the animal writhes and twists as its blood pours out; the animal dies because its blood was its life.

Christians must bear this in mind about the groanings of Jesus the Messiah on the Cross, and should not scold any Jew for the blood-letting of this great

JESUS MADE KOSHER - Schulte (cont'd)

sacrifice of the Lamb of God. In our Messiah Jesus, the symbolism of the former covenant is fulfilled, because "it is the blood that atones for the life" of every child of Adam and Eve.

For Jesus to be the perfect sacrifice, He had to have all the blood drained from Him during His passion and death, just as the sacrificial lamb was prepared. Those people crucifying Christ did not realize this but they were being directed as part of God's plan.

The burial cloth of Jesus Christ can help us understand in an extraordinary way how Jesus was made Kosher. In this connection, some of the past interpretations about the crucifixion made on the basis of the study of the Shroud need to be corrected.

Many of the books on the Shroud show a graphic of the lance penetrating the ribs and then moving upward to penetrate the heart. I challenge the idea that the lance moved upward and stopped in the heart. In some versions of the Old Testament, in Isaiah 53:5, it states that, "Yet He was pierced through for our faults, crushed for our sins." We know that this is in reference to the suffering of the Messiah Jesus. The key word is "through", which the dictionary defines as "in one side and out the other." If we believe the Word, the Shroud, and the idea of the upward thrust of the lance, then we expect to see an exit wound high on His back at the opposite side from the entry wound. Yet there is no exit wound seen at this spot on the Shroud.

I contend that the lance was thrust downward and through His body and that the Shroud proves this. The blood on the dorsal image that is shown at His waist had to flow while He lay in the tomb. Some of the blood is definitely not from contact with the body because it is outside of the perimeter of the body image. The color of this blood, rich in plasma, is such as to lead one to consider it as a "result of the sedimentation of the red corpuscles after death in the cardiac cavity pierced by the lance." (Dr. Giordano). This blood could only have come from the exit wound of the lance. It could not have come from the frontal lance wound because that would have been approximately 5 inches horizontal to the waist and higher than the heart in the horizontal position.

I explained this idea to a medical doctor and he stated that the lance could not have gone downward and still strike the heart because the heart is higher than the incision point of the lance at the ribs. Of course, this is true when the body is erect or straight, but the heart moves down in relation to the ribs when the body slumps forward. You can hold your finger on your heart and put another one on your rib and then slump forward to see that the relationship changes. Jesus was hanging dead on the cross in the slumped position when the lance was thrust. The slumped position allowed the lance

JESUS MADE KOSHER - Schulte (cont'd)

to clip the bottom of the heart allowing all the blood to flow out of the heart. The exit wound at His waist allowed the blood that was accumulated to flow out. It could not have drained if the entry wound was the only wound. The force of gravity would have prevented it.

The enhanced photographs of the Shroud Dr. Alan Whanger and his wife Mary have produced show the images of the lance, nails, the sponge, flowers, and the crown of thorns alongside the image of Jesus. What is interesting is the surprising fact that the photographs indicate that the tip of the lance is missing. Why is it missing? How did the lance get in the possession of the followers of Jesus? Soldiers do not give up their weapons to the opposition for burial practices. I submit that once the lance went through His body, it stuck in the upright and the thruster had to either abandon it or he jerked it to break it loose so that he could extract it. Since the point was missing, the weapon was useless, so he could have discarded it. The lance could have hit the upright if Jesus was slumped to the side. If the soldier abandoned it in upright, then one of the followers of Jesus jerked it to extract it once Joseph of Arimathea got permission from Pilate to remove the body.

Another consideration for the idea that the lance took a slightly downward path through Jesus' body is the collection of statements from visionaries stating the lance was thrust from a soldier on a horse and the Jesus' feet were only a few feet from the ground. In the detailed motion picture *Jesus of Nazareth*, the soldier was depicted thrusting the lance while on a horse.

In the booklet *The Holy Shroud and Four Visions*, the authors Patrick O'Connell and Charles Carty state the visionaries of the crucifixion, Teresa Neumann and Anne Catherine Emmerich, saw the tip of the lance exit His back. In Teresa Neumann's stigmata, the wound on the side seemed to go right through her heart, and it appeared on her back like the point of a lance.

Turning attention to the wounds in the feet, the following needs to be stated. Many of the publications on the Shroud show a graphic that has an x-ray type image of the foot showing a nail wound between the metatarsal bones at a midfoot location. When we look at the dorsal image of the right foot on the Shroud, we can see a large blood clot at this location. On the same foot, we can also see blood at the heel location that flowed while He lay in the horizontal position. This is obvious because the blood is outside the perimeter of the body and like the flow from the lance's exit, it flowed 90° to the vertical. The frontal image also picked up this same blood flow because there is a mirror image of it at the same location. On the dorsal left foot image, we can see blood in the area of the heel and part of the blood image is missing. This missing area has been interpreted to be the finger markings of

JESUS MADE KOSHER - Schulte (cont'd)

someone who supported His body. From the writings of Mary of Agreda in the book *City of God*, these finger markings are identified as being those of Mary Magdalene. In Monsignor Ricci's book *The Way of the Cross in the Light of the Holy Shroud*, the interpretation is the fingers supported His legs as He was moved to the tomb. Usually dead weight is not supported at the edge. It would be supported at the center or in the transport case at the armpits and knees. I suggest the reason the markings are under the heel is because it was the best place to support His weight when He was released from the cross. The position of the hands in the Ricci graphic indicate that the person was reaching down as would have been the situation if the feet were only a few feet from the ground. For the blood to be at His left heel while she supported His body, the blood had to have flowed while He was in the vertical position. It could not have flowed upward from a midfoot penetration due to the laws of gravity.

What then is the explanation for how Jesus was nailed in this area? We know that Jesus was racked, i.e., He was first nailed in one wrist and then stretched before the other wrist was nailed. Then His leg was pulled before nailing (Psalms 22:14), "I am like water poured out; all My bones are racked." The Shroud dorsal image shoulder view encourages this prophecy since one shoulder is higher than the other and one leg appears to be longer than the other.

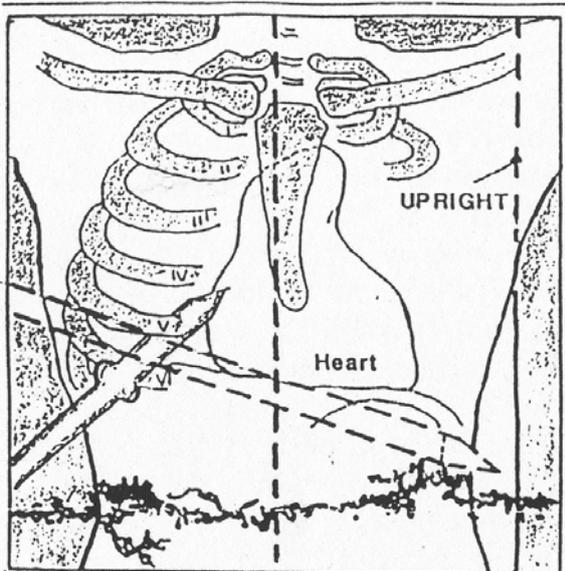
If the clot in the right foot at the midfoot location is an image of a nail, then Jesus was first pulled by this foot and then nailed through the central part of that foot to hold Him in a racked position. His left leg was then pulled over the right and they were both nailed together with one long spike through the ankle/heel. The reason we cannot see a blood flow down the left foot to the toes is because the foot was angled out from the center line of the body. The reason that the right foot was nailed again could have been to ensure that there would be no escape from the cross. The second nailing, like the wrist nailing, was surrounded by bones.

It is important to remember that for all the blood to be drained from His body, it was necessary for the nails to exit in the heel area. This allowed the blood from His legs and feet to drain. A midfoot location on both feet would not have made this possible while Jesus lay in the tomb in the horizontal position.

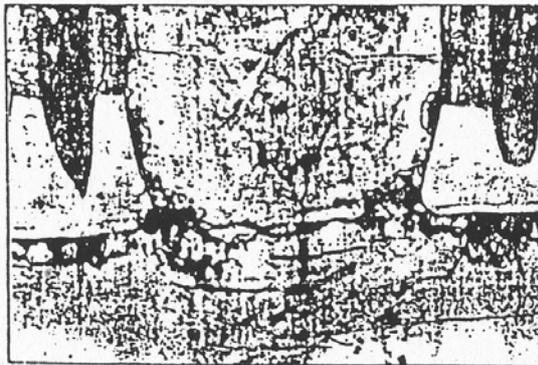
It is interesting to note that in a recent apparition, the seer claimed that Jesus told her that He wanted to set the record straight about the details of the crucifixion. She claims that He told her that He was nailed through the ankle/heel area.

The archaeological find in the cemetery of Git' at ha-Mivtar of the skeleton

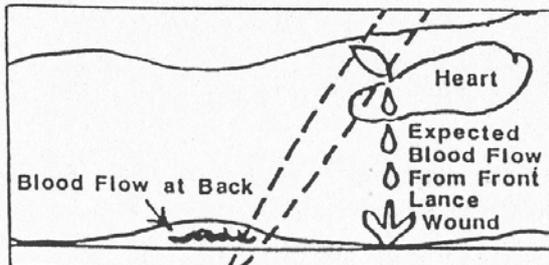
JESUS MADE KOSHER - Schulte (cont'd)



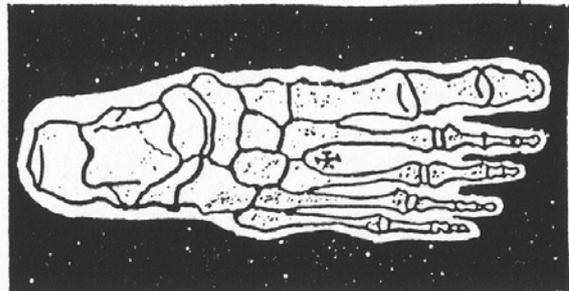
Traditional graphic that appears in some Shroud books showing lance moving upward and stopping in the heart. Dashed image is correct interpretation. Note lance stuck in upright of cross. Graphic has been extended to show location of blood on back of Shroud that flowed while Jesus was in a horizontal position in the tomb.



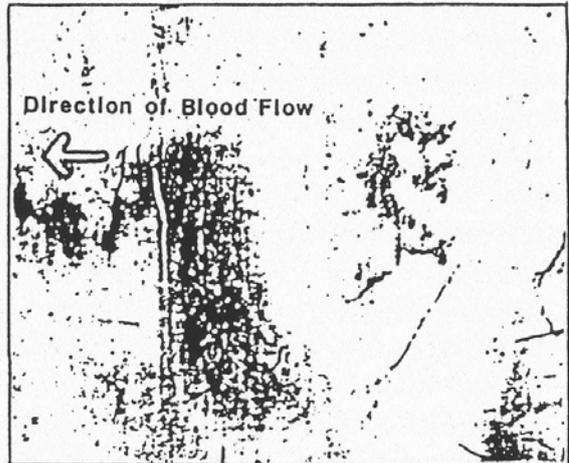
Shroud photo of back image. Where did blood come from?



Sectional graphic shows that blood seen on the Shroud's dorsal image could not have come from location of front incision.



Traditional graphic that appears in some Shroud books—it contends that Jesus was nailed only at the metatarsal bones..



Shroud photo of back image at feet—shows blood that flowed while Jesus was in a horizontal position.



Shroud photo of feet with hands shown reaching down to support His body as it was released from the cross. How could blood already have been at heel if He was nailed only at a midfoot location?

JESUS MADE KOSHER - Schulte (cont'd)

of a man named John of Ezechiel [Jehohanan the son of Hagkol], crucified at the time of Jesus, indicated that he was nailed through the heels with one nail 6.8 inches long. Does it make any sense to say that Jesus was nailed in the same location?

An objection can be raised to the bleeding corpse observation. The point is that a beating heart is required to force blood out of a body. This argument fails to realize that if you puncture the side of a sac distended with liquid, then that liquid will run out of the hole and no pump is needed. The accumulated blood in Jesus's body was set free to move by the wounds placed lower than the blood and then gravity pulled the blood out of His body.

If all the penetrations are as described, there are then a total of twelve openings in His body. This includes both entry and exit location. Twelve is a biblical number; 12 months, 12 tribes, 12 apostles, 12 thousand of the tribe, 12 stars, 12 gates, 12 pearls. Perhaps twelve penetrations are not significant or perhaps now we have another reason for seeing why twelve is an important biblical number.

"The life is in the blood" ... that was the former covenant of God with men. The former covenant was only preparatory, and that is why it could not give life by itself: it did not have life to give. But Jesus as Man (of Jewish descent) was drained of His Blood like an animal to show the end of the first covenant; while Jesus as God rose again with all His everlasting Blood to give life eternal. That is why Jesus was able to say to His Beloved Jewish People: "Amen, amen, I say to you, unless you eat the flesh of the Son of Man and drink His blood, you do not have life within you. Whoever eats My flesh and drinks My blood (actually) has eternal life in Him and because of that Life, I will raise him on the last day. For My flesh is true food and My blood is true drink." (John 6:53-55)

MUSEUM OF CHRISTIAN RELICS

There is a Museum of Primary Christian Relics which includes a section on the Shroud at Santa Cruz Memorial Park 1927 Ocean Street Extension, SANTA CRUZ, California, 95060.

Open Saturday 1 - 4 or otherwise by phone to Joan Grasso the curator at 408 426 1601

The theologian to the exhibit is Rev Aldo Grasso OSJ Tel: 408 423 7658

The Scientist to the exhibit is Earl Taft 408 475 8494

THE HOLY SHROUD OF TURIN: A TENTATIVE EXPLANATION OF THE PROBLEM CONCERNING THE IMAGERY AND THE DISAPPEARANCE OF THE BODY

-Fr Roger Reuse, Brugge, Belgium

It is not easy to adopt an objective attitude regarding a much debated question. There are always pros and cons. The best plan, it seems to me, in this case is to start from those points on which we are all agreed, both those who are 'for' and those who are 'against'.

Thus there are four statements that are commonly accepted:

1. It is a genuine shroud, not a man-made fake. In this shroud a dead man has been wrapped and traces of the passion are marked (the flagellation, crowning with thorns, the wound made by the lance, and those made by the nails in the hands and feet), that is, the passion of Jesus Christ as told by the evangelists.
2. So far no one has been able to explain how the image came to be on the cloth.
3. The analysis of the elements composing the image show that some irradiations have caused an oxidation and dehydration of the tops of the fibres. On the reverse side of the Shroud only blood stains can be seen and stains made by the water used to put out the fire at Chambery in 1532.
4. According to the evangelists the Body of Christ disappeared, but where and how?

HYPOTHESIS

A. ARGUMENTS TAKEN FROM SCRIPTURE:

In chapter 28, verses 1 to 4 of St Matthew's Gospel, we read: "After the sabbath, and towards dawn on the first day of the week, Mary of Magdala and the other Mary went to visit the sepulchre. And all at once there was a violent earthquake, for the angel of the Lord, descending from heaven, came and rolled away the stone and sat on it. His face was like lightning, his robe white as snow. The guards were so shaken, so frightened of him, that they were like dead men."

- a) An earthquake - the open sepulchre.
- b) A very bright light (when there is question of an angel of the Lord in the Bible, it is a symbol of some divine intervention).
- c) It has been conjectured that the evaporation of the tortured body's

A TENTATIVE EXPLANATION - Reuse (Contd)

ammoniacal fluids together with the spices around it, caused a reaction which made the linen sensitive enough to receive the imprinting of the image provoked by the extraordinarily bright light - like lightning. Experiments of this sort show that such an effect is not impossible. The very bright light, the streak of lightning would have been strong enough to form the image.

B. THEOLOGICAL ARGUMENT:

Dogmatic theology tells us that Christ was in all things identical with man, except for sin, which includes death and the decomposition of the corpse. Would it be foolhardy to imagine that this irradiation was so powerful that it not only produced the image of the body but also carbonized it? Thus the problem of the disappearance of the Body would be solved.

After the nuclear explosion in Hiroshima, the outline of animals and objects were found printed on the walls. The analysis of these show a certain resemblance with the image on the Shroud of Turin. Who would dare deny that as research progresses in nuclear science, it may reach still more astonishing results? Science evolves at such a tremendous speed that no one can foresee where it will stop. Not so long ago things that have now become an accomplished fact, were taxed as 'science-fiction'.

The phenomenon of the image imprinted on the Shroud would then be due to the streak of lightning that appeared at a very definite moment on Easter morning.

Today we have crematoriums where the deceased may be incinerated and whose remains may be respectfully preserved in urns. Is it impossible to imagine that one day we may be able to possess, as a happy memory, the mortal remains of a dear one, more or less atomised, but persisting in a linen shroud? Is this just a wild dream or simply utopic?

BYZANTINE FRESCOES

The response to our publication of the Runciman Shroud Monograph No 2, *Byzantine Frescoes and the Turin Shroud* by Lennox Manton was overwhelming.

The decision to produce and send the booklet as an adjunct to *Shroud News* 81 with the full colour plates of Lennox Manton's superb and unique photographs he has taken over many years in Cappadocia has provided an exciting item of material for art historians and Shroud researchers alike.

We are being encouraged to produce more of these monographs and work is under way to do so shortly.

We think we should share some of the unsolicited (and unexpected) compliments which are being received from all over the world:

"Warmest congratulations on your latest issue of *Shroud News*. It is extremely good to see Lennox Manton's paper in full colour and I heartily commend your enterprise."

- UK

"This is an excellent idea, to publish little booklets on special subjects, and deserves a following."

- USA

"Magnificently produced *Byzantine Frescoes and the Turin Shroud*"

- USA

"Very thrilled to receive this booklet. Wonderful! Thank you so much. I enjoy *Shroud News* so much and appreciate all the hard work put into it to make it a fully readable, interesting, knowledgeable publication."

- Australia

"Just received the February *Shroud News* and the booklet. Enjoyed them both."

- USA

BYZANTINE FRESCOES (cont'd)

"Thank you very much for the paper of Lennox Manton. It is a beautiful and very interesting paper."

- **Belgium**

"Thanks for *Shroud News* 81 with the monograph by Lennox Manton. Keep up the good work. We all look forward to reading your publication"

- **USA**

"Thank you so much for *Byzantine Frescoes and the Turin Shroud*. The narrative is informative and the color pictures are very much appreciated. I wish to encourage you to consider more monographs hopefully with color illustrations where appropriate (and would gladly contribute more than \$5 each)"

- **USA**

"... to cover my subscription to July 1998. I am optimistic that *Shroud News* will indeed top the 100 issue mark."

- **USA**

Further copies of

Byzantine Frescoes and the Turin Shroud

by Lennox Manton

can be obtained from

The Runciman Press,

POB 86, Manly, 2095, Australia

or Fax 61(0) 2 982 9956

for \$5 per copy (Australian or US currency) Overseas

please send only actual currency notes, NOT cheques as it

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subscribers MAY send personal cheque as we have UK bank

or use Visa, MasterCard or Amex card any country

[Editor's Note: This monograph is now available on Shroud.com - [Byzantine Frescoes](#)]

Shroud News began in 1980 when Rex Morgan, author of three books on the subject of the Holy Shroud (*Perpetual Miracle*, *Shroud Guide* and *The Holy Shroud and the Earliest Paintings of Christ*) and editor of several others, began sending a few notes about current developments in the study of the Shroud of Turin (Sindonology) for a small circle of interested people in his home country of Australia. He didn't expect it to go beyond a few issues.

Today, the bulletin, now highly acclaimed, reaches subscribers all over the world and is written, produced and disseminated more quickly than any other Shroud publication in the English language. It contains information, news, articles and illustrations gathered from sources of Shroud study worldwide through Rex Morgan's extensive network of personal connections with what has been described as the "Shroud Crowd".

Rex Morgan is a frequent traveller overseas which gives him the opportunity to keep abreast of latest developments in Shroud study and research at first hand. He was present at the world media preview of the Shroud itself in August 1978 in Turin, Italy and has met and knows numerous Shroud researchers in many countries. His quest for Shroud information became, as he described it, "a passionate hobby". He took the world famous Photographic Exhibition created by Brooks Institute, California, to Australia, New Zealand, Hong Kong, Macau, and Canada and during those tours it attracted more than 600,000 visitors. The exhibition was subsequently donated by Brooks to the non-profit making organisation, The South East Asia Research Centre for the Holy Shroud (SEARCH) of which Morgan is President. He is also a Board member of the US based Association of Scientists and Scholars International for the Shroud of Turin (ASSIST) and was a member of the scientific team which conducted environmental experiments in a Jerusalem tomb in 1986 (ESSJ). He has made a number of original contributions to Shroud research has presented major papers at international Shroud conferences has written numerous articles and has given hundreds of broadcasts and telecasts on the subject in many countries.

The list of *Shroud News* subscribers continues to increase internationally and it has been described many times as one of the best available. *Shroud News* comes out six times a year. Its production is obviously privately subsidised as we request a subscription in Australia of only \$6 for six issues posted. The USA subscription is \$12 (posted airmail - there is no longer any surface mail from Australia). Postage to other countries varies. ALL back issues are available for \$1 (US or Aust) each plus postage. The famous 50th issue is \$3 plus post. Customers should note that as it costs us \$8 to negotiate each foreign cheque we request all payments be made in currency banknotes of your country or charge to Visa, Master or Amex cards.

All information and opinion in this private newsletter is published in good faith. It is edited by Rex Morgan and published by

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