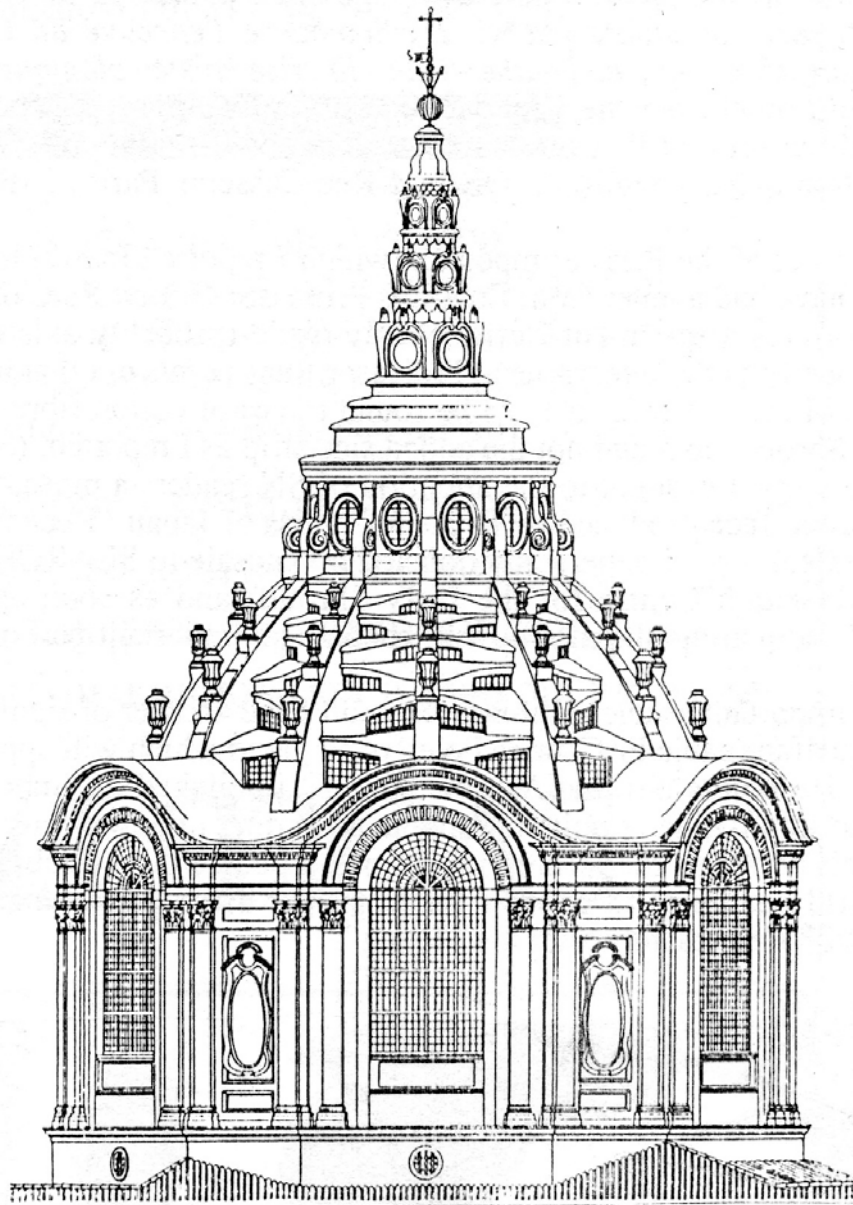


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A NEWSLETTER ABOUT THE HOLY SHROUD OF TURIN
edited by REX MORGAN
Author of PERPETUAL MIRACLE and SHROUD GUIDE



GUARINI'S DESIGN FOR THE CHAPEL OF THE HOLY SHROUD, TURIN

EDITORIAL

I had hoped that a full text of the remarkable paper given by Aaron-Arnaud Upinsky at the Paris Symposium on the Shroud last year would become available. It is clear that the Symposium proceedings will not be able to contain more than a small part of this paper which Upinsky delivered at top speed under great pressure in a limited period of time. When I wrote to him seeking a full copy together with his numerous diagrams I had expected a typescript. It was, then, a great pleasure to receive, hot off the press, a new 240-page book published by OEIL of Paris which is, in fact, his whole paper: *La Science a l'epreuve du Linceul - La demonstration scientifique de l'authenticite - la crise epistemologique*. The text is, of course, in French, but the paper is such a vitally important contribution to Shroud study at present that one hopes Upinsky will see his own hopes for an English edition quickly realised. (OEIL, 4 Rue Cassette, Paris, ISBN: 2 86839 142 7).

On the subject of the Paris Symposium which I reported in *Shroud News* Nos 55 and 56, I have had a letter from Emeritus Professor Gilbert Raes of Belgium in which he corrects a statement I erroneously made (probably as a result of not listening properly to the interpreter). Professor Raes points out that in his famous study of the Shroud sample in 1973 he found traces of cotton fibres in the main body of the Shroud cloth and not the added side strip as I reported. (SN 55 p 23).

Some years ago I brought to the attention of SN readers a mosaic tile portrait after the Shroud face produced by Fr John Conliss of Japan. Recently a Sydney *Shroud News* subscriber generously donated his mosaic to SEARCH (The South East Asia Research Centre for the Holy Shroud) and as soon as we have a permanent headquarters the mosaic will become an important part of the display material.

There are important articles in this issue and I have another of significance from the pen of indefatigable Fr Charles Foley of England which will appear in SN 60 in August. He points out that *Nature* has just published an important article showing that C14 dating is quite unreliable according to new evidence about the method. This confirms the recent view of many people but I doubt that we shall see any world headlines to counter the improper assumptions made about the Shroud in 1988 immediately after the "dating".

REX MORGAN

INTERVIEW WITH Dr MICHAEL TITE

ORAZIO PETROSILLO (Rome Journalist) and
Professor EMANUELA MARINELLI, (Rome)
8 September 1989, during the Paris Symposium

PETROSILLO: So now you have a promotion?

TITE: I'm getting less money in this new job. I've been at the British Museum for fourteen years so a change is a change.

PETROSILLO: Why were the recent tests not undertaken with inter-disciplinarity? What is your opinion?

TITE: I think it is because we saw the radiocarbon dating as a completely separate operation. One took one's samples and then when one had finished with the Shroud as an object one went back to one's laboratories and made one's measurements. It was just a separate operation. It would have been entirely possible for the other scientists to have been doing their work once we had taken the samples but we thought there would be so much press and media coverage if it had been done under those circumstances that it would have just made life more difficult than it was already. I think that was the only reason.

P: It was easier for you to work just with the carbon experts?

T: Yes, without many people. We needed the Shroud only to take the samples. Once we had taken them the Shroud could go away as we had finished with it. The other groups needed to work with the Shroud for extended periods and we just felt that if we did it altogether then there would be so many people milling around the Shroud, there would be all sorts of doubts about the samples, where they'd come from. If everyone had been there, there would have been hundreds of people and we just thought it would be so much easier if we got our samples first. It could have been the next week or anything but from our point of view we just wanted to remain separate physically just because of the crush.

P: So it was just keeping privacy?

T: Yes, privacy and ease of taking the samples. There were 20 or 30 people as it was. If you'd had all the other scientists the room would have been packed with people.

P: Somebody raised this strange matter: That the laboratories were in close contact with each other during the period.

T: There was no point in contact. There was nothing to compare. They'd do the work alone and then send it off to me. My concern was have you finished yet but that was all. I'm sure nobody communicated anything between the laboratories.

MARINELLI: It is strange that they decided not to do blind tests. How could the three laboratories decide to do their work in the same manner, the same way, without an agreement?

TITE INTERVIEW (cont'd)

TITE: The decision not to blind test was decided effectively by the time we went to Turin to collect the samples or more or less at Turin when we collected the samples. We had decided it could not be a blind test because they'd been given whole pieces of the Shroud which they could immediately identify and therefore it could not be a blind test. And that was all decided before, or at least at, Turin. I suppose finally at Turin when we decided we were going to give them a whole piece of cloth which they could immediately identify because of the unusual weave. So the decision that it was not blind was taken finally at Turin but we did not change the details of the protocol so although the test was not blind the Cardinal and I and, in fact, also Professor Gonella, went into a separate room and put the samples in steel containers as if it was blind but this is just an anomaly of the protocol which had not kept pace with our changing ideas as to how it should be done. The thing evolved. We had a protocol which evolved as we went through it. We collected our control samples and did other things and so it evolved. One does not see a protocol as an absolute. It is a guideline and it evolved. It was only at Turin we decided it was not blind but there were some oddities that stayed in. They are just anomalous; there is nothing sinister about them.

P: Professor Gonella says that the laboratories did not give to the church representatives the same hospitality that they gave to them. So you were in Turin but nobody from the church was allowed to follow the examination but somebody else like Sox or Gove participated in the research in the labs.

T: I do not know whether Prof Gonella specifically asked to be present when the measurements were made. You must ask him this. My feeling is that if he had asked I think the labs would have said yes. Perhaps he did ask and he was refused. I don't know. I can't see why if he asked they wouldn't say by all means. There is no doubt the labs said they wanted to be in Turin. They certainly said that they wanted to see the samples being taken. I think partly it was quite an historic event to do radiocarbon dating of the Shroud and therefore if you have done radiocarbon dating on the Shroud you would like to feel you had been there and seen the Shroud and actually taken the sample more or less directly from it. If the sample had been given as shreds it was in everyone's interests that as many people as possible systematically watched and saw the samples being taken, going into the containers and being given to the labs. You see it was in everyone's interests. It was not the labs not trusting the Cardinal but somebody afterwards that said it could have been swapped. And one is protecting everyone by having people involved at this sort of level. Not the labs not trusting the Cardinal but the press or somebody outside could say the samples were swapped.

P: What about the fourth sample?

T: I was asked to provide two control samples, one from the period of Christ and one from the Middle Ages. The sample from the period of Christ was very easy to find. There are many pieces of linen from that period available.

TITE INTERVIEW (cont'd)

P: This was from Cleopatra's tomb?

T: I'm not certain. I'm not an Egyptologist, but there are many pieces of linen from Egypt of that period. They are very easy to obtain and I obtained a piece from the British Museum. That was the first control, no problem. The second control, from the Middle Ages, was very much more difficult. It is difficult to find a piece of linen which is reasonably well dated historically from the Middle Ages which somebody is prepared to let you cut off a piece that size. There was none in the British Museum, there was none in the Victoria and Albert Museum, there was none in the Cluny Museum in Paris, and so I was beginning to get slightly panicky because I had to provide two samples so I mentioned to Professor Gonella that I was having some difficulties and he mentioned it to M. Evin. I mentioned it to Ian Wilson and to someone in England who eventually provided the one sample which I brought. I wanted one sample but in order to get it I asked four people so there's this story that I was looking for four samples but I only wanted one. Now, I produced the sample in the end from some cloth in Nubia from an Islamic Christian grave which was dated to be 11th or 12th century which was a bit earlier than we wanted and it was not very precisely dated in reality and we were unable to get, even then, a big enough piece to do a conventional radiocarbon date. So I had my doubts but I thought it was a valid sample. I came to Turin with two samples. I knew that Evin and Vial were trying to get a sample from a place in France but I had not heard whether they had got it. When we arrived in Turin I had my two samples which were whole pieces of cloth and I found that Evin and Vial had also been successful. I think that was the first time I knew they'd been successful. We had together approached the Cluny Museum who'd said no and I knew that they were approaching another source but I don't think that until I got there that I knew they'd actually got a sample. So they had what was the fourth sample, or the third control sample, but it was in the form of threads so the labs agreed to date all four samples. Two of them were whole pieces of cloth so they were treated in the same way as the Shroud sample and were part of the blind test protocol for which we'd got these blasted cylinders which were numbered and although the test was no longer blind we still went ahead and put them in. So the two controls that I had brought went into the cylinders and we had this fourth sample which was given to the laboratories in an envelope at the same time. They were packaged up with the Cardinal and Professor Gonella there and everyone knowing about it.

P: The Cardinal was there when it was put into the envelope?

T: Certainly the Cardinal was there. We had a ceremony with the three containers in which he said, "There we are, there we are, there we are," but the other samples were in the envelope and I gave them to the recipients but it was at the same time. It was packaged up with both the Cardinal and Gonella there.

TITE INTERVIEW (cont'd)

P: Riggi doesn't mention it, neither does Sox.

T: But Professor Testore mentioned it yesterday in his talk and he in fact was the person who weighed up the threads.

MARINELLI: It was not in the box with the tubes?

T: No, because we only had three tubes.

M: The first sample was not in a tube, nor was it in the box with the tubes?

T: No. Because the box was designed to take three tubes.

M: There is no mention of the fourth sample in your letter to the Cardinal.

T: No, because we were expecting two samples, one from the period of Christ and one medieval. It was the medieval one we had difficulty with so we ended up with two. At one stage I was worried whether we'd have any but we had two and so we gave the two.

P: You knew on 21st April that Evin was there and he participated in the ceremony?

T: No, he was not present. He was in Turin at the time. I think he saw it sometime during the afternoon. But Vial was there because he was one of the textile experts who was guaranteeing or examining: someone who could say afterwards that it came from the main piece of the Shroud. And one gave that fourth sample for a number of reasons. It would have been extremely embarrassing if the French had gone to this great trouble to obtain this thread and it was never dated. That was one reason and secondly because the labs were quite happy to date another sample and thirdly it was a much more precisely dated control than the one that I had brought. The one I'd brought was almost certainly 11th or 12th century whereas this one was precisely dated to about 1300 and so it was a very good control to have. So we gave it to them. But it's caused a lot of trouble; it's given people a lot of red herrings they can follow.

P: But what is embarrassing is that this fourth control is exactly the right date.

T: We were trying to get a control which was close to the other possible date for the Shroud, that is, when it appeared. That was an ideal control but it is also where the dates are closely grouped together whereas the Shroud has a wider grouping between the labs.

P: I'm not an expert of course but I think, in my mind, that if you put two twins into the test they will not give the same age as the fourth sample and the Shroud.

T: The alternative would have been that if the Shroud had come out at the period of Christ it would have matched closely the other control and somebody would have said, "How odd, it's just like the control from Cleopatra's linen." We had great difficulty finding a medieval sample with the added restriction of a herringbone weave and M. Vial yesterday gave a survey of various Shroud and linen samples and he said that it was very rare to find herringbone twill in linen before the 16th Century, he found samples in silk.

TITE INTERVIEW (cont'd)

M: In Sox's book he says one of the control samples was similar herringbone twill.

T: No, it was not. As Vial said, the oddity is that in the Cope from Florence, the weave of the linen is normal but the weave of the gold thread embroidery is, in fact, herringbone and on the linen apparently there is an impression from the gold that shows up as herringbone. Some people therefore thought that the cloth itself was herringbone. This is still irrelevant because the sample the labs were given were individual threads, so this just adds to the red herrings.

P: Why did the individual labs not publish photographs with weights and more details? The article in *Nature* has no photos.

T: The labs photographed their own samples and the archive exists but *Nature* was not prepared to take anything longer than they did. It was quite a battle getting all the data in that we did get in which was certainly the data for each of the individual measurements. It contains far more detail than any other published radiocarbon date.

P: Why did you choose *Nature* and not *Radiocarbon* or other publications?

T: Because *Nature* is put out more rapidly. It comes out once a week and is accepted for immediate results.

M: But we still waited until February.

T: I wrote the article. I was the person who put it together and circulated it to the labs and they added their bit. In our lab we did the statistical analysis.

M: In Sox's book he says that in Zurich the weight of the Shroud sample was less than it was in Turin.

T: I don't think the labs knew the precise weight of the samples. It is not really relevant.

M: The Shroud was polluted?

P: The Shroud sample was not as polluted as expected?

T: These are all relative terms. Clearly it was polluted as every sample is and the labs went through the normal pre-treatment processes but more carefully than normal. They also tried a weak pre-treatment and a strong pre-treatment without any very great difference. Has your newspaper not reported the French gentleman who accuses me of swapping the samples?

P: Yes, but I quoted him. We have no axe to grind ourselves.

TITE INTERVIEW (cont'd)

M: Was a report written in Turin on 21st April?

T: I hope so but that was the responsibility of Gonella and Riggi. They were providing the documentary. We have the full video.

P: If there is no doubt that the Shroud is medieval what do you think about the research reported at this symposium, for instance, the many arguments from the point of view of history, iconography, etc? How do you personally explain the Shroud being from the 14th century?

T: I think the other scientific data is not inconsistent with a 14th century date. I was listening to a paper saying the pollen comes from Jerusalem. Well, the Shroud could have come from Jerusalem in the Middle Ages. I'm not going to criticise historians and art iconographers but clearly it's less hard data than scientific data. You can put a lot of interpretations on iconography but with other scientific data like the presence of bloodstains and the discoloration it is as difficult to explain how the image got there if it is the date of Christ as it is of the Middle Ages. The blood could have got there at either time. I'm not competent to judge the iconography. We still have to explain how the image got there and whatever way it is it could have been just as easily at either period. I think almost certainly that a body or some 3-dimensional object must have been involved to produce an image like that but it could have happened in the Middle Ages just as easily as 2,000 years ago.

P: At the moment there is no argument to certify that the Shroud was made by some artist?

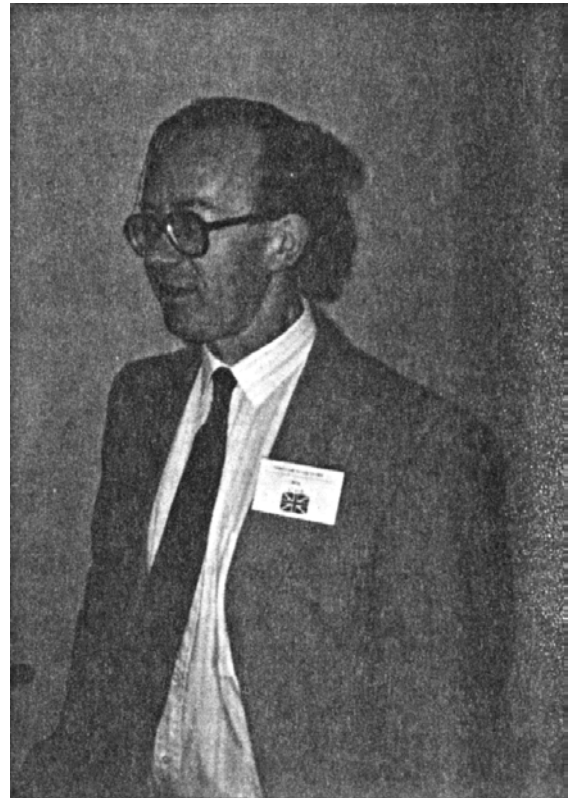
T: No, we do not know. I personally think a body was involved in the Middle Ages. No iconography is clear-cut. There were crucifixions in the 14th century in the Crusades. I found the rest of the Symposium very interesting. The Shroud is a unique object whether it is medieval or 2,000 years old and it needs to be conserved. It is still important to find out how the image was formed but I have no doubts myself that it is medieval.





Professor Emanuela Marinelli of Rome, Author and leading light of the Rome Shroud Group, Collegamento Pro Sindone

Professor Michael Tite, Co-ordinator of the C14 Test in 1988, formerly of the British Museum, now head of the carbon dating laboratory at Oxford University succeeding Professor Teddy Hall



Floral, Coin, and Other Non-Body Images on the Shroud of Turin

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I. Introduction

On viewing the Shroud of Turin, one's attention is naturally first drawn to the front and back images of the crucified man thereon. Great study and speculation have gone into trying to determine how and when this image got on this fourteen foot long piece of linen, as well as on who the image is.

For those who choose to accept as fact the results of the 1988 carbon dating indicating that the Shroud originated in medieval times, the questions should arise as to how some artist of the 14th century managed to encode an anatomically and physiologically perfect image in the negative on the cloth without pigment, why there are an abundance of middle Eastern flower pollens on the Shroud, and how and why the facial image of the Shroud was so accurately portrayed hundreds of times in a wide variety of artistic media between the first and the fourteenth centuries.

We believe that some of the answers to these and other relevant questions can be found by studying the various images, other than the body images alone, which are found on the Shroud itself.

Perhaps the first attention given to findings that would later be correlated with non-body images was by Dr. Max Frei, who found many pollen grains in the sticky tape samples he took from the Shroud in 1973 and 1978. This led him to extensive further studies to elucidate these findings until the time of his death in 1983 (Ref.).

More recently, the Association of Scientists and Scholars International for the Shroud of Turin, Inc. (ASSIST) acquired the Frei Collection, and further studies on these valuable materials are underway, with additional studies proposed. Dr. Frei identified some 58 different pollens on the tapes from the Shroud, and in more recent studies of the tapes, Paul Maloney has located and photographed hundreds of pollens on some of the tapes. Most of these are from insect pollinated plants rather than from those with wind-blown pollens. Preliminary reports are being prepared and released.

II. Image Formation and Analysis

Another major observation was by Jackson and others in 1977 (Ref.) who noticed that three-dimensional computer images of the face showed button-like objects over each eyelid, which they speculated to be coins. Father Frank Filas in 1979 first identified the imprints of small letters and patterns over the anatomic right eye which turned out to be remarkably similar to those on a Pontius Pilate lepton coin (the Biblical widow's mite) struck in A.D. 29 (Ref.).

FLORAL, COIN AND OTHER NON-BODY IMAGES (cont'd)

Subsequently, in 1981 we developed a method for exacting image comparison which we called the polarized image overlay technique in which the two images for comparison are projected one on top of the other on the same screen through polarizing filters at right angles to each other. By observing these images through a third polarizing filter which is rotated, one can shift from one image to the other and compare the two images in great detail (Ref.). This enabled us to confirm that indeed there is an image of a coin over the right eye and that the coin from which that image was formed was a die mate of a rare Pontius Pilate lepton, the only known one of its striking, in existence.

This unique coin, struck in A.D. 29, was not found until 1977. It is, therefore, hardly plausible to claim that a medieval artist would have included this tiny detail of a coin then unknown and which could not be discerned for at least another five hundred years when optical, photographic, and computer imaging techniques would first be able to demonstrate such fine points.

Also, by the overlay technique, we were able to identify the less clear image over the anatomic left eye, which is of another Pontius Pilate lepton which was struck only in A.D. 29.

Hence, we feel that the image on the Shroud (as separate from the fabric) is self-dating by the presence of the images of two identifiable coins, both struck in Palestine in A.D. 29.

A major spin-off from the identification of the coin over the right eye was the observation by Alan Adler in 1982 (Ref.) that the congruencies between the image on the Shroud and the actual coin (i.e., the die mate) were on the elevated points and irregularities on the coin's surface, following a pattern that one would expect from a coronal type high energy discharge. Speculation about the possibility of this type of image formation had already been made by A. A. Mills (Ref.). This line of investigation was then picked up and pursued especially by Oswald Scheuermann, with whom we have collaborated. Scheuermann has developed remarkable skill and experience in producing coronal type images both photographically and on linen. His methods are similar to electrophotography or Kirlian photography (Ref.). He has produced coronal images of and off of a wide variety of materials which have enabled us to have a much better idea of what various images might look like, and this has made it much easier to identify and understand images and patterns seen on the Shroud, even though the exact mechanism of formation of the Shroud image remains a mystery.

We were able to identify and confirm by the image overlay technique that there are two objects on the body, one on the forehead and one on the anatomic left arm, which are compatible with ancient Jewish phylacteries, and that both these objects have been desecrated by being torn open. The one on the head accounts for the image of the little box area between the eyebrows and the V shape over the bridge of the nose.

Scheuermann has made a number of observations on images in unpublished manuscripts which help to illumine what is seen on the Shroud. As mentioned, coronal type images tend to come off of pointed and irregular surfaces, as well as margins. Where the object is in touch with the surface (Shroud, linen, photographic plate), the image tends to be dense. Where the object is

FLORAL, COIN AND OTHER NON-BODY IMAGES (cont'd)

partially in contact with the surface, the outline is dense and partial with a light central area. Objects which are further away from the surface or which are moist (with blood or sweat) tend to produce "shadow images" or "non-images," meaning that there is a negative image with a surrounding darker "halo." Many of the images on the Shroud are a mixture of these features. In addition, moisture content, chemical content, and subsequent heating of the linen have much to do with the density of a radiation or coronal type image.

III. Floral Images

During his studies in 1983, Scheuermann made an observation that there seemed to be flower-like patterns around the face. We looked, but at the time were not able to distinguish the lines and patterns that he referred to as being flowers. It was not until two years later that, while examining one of our many photographs of the Shroud with a magnifying lens that I suddenly saw out of the corner of my eye the image of a large Chrysanthemum-like flower on the anatomic left side about 15 centimeters lateral to and 6 centimeters above the midline top of the head.

Our studies have been made possible by our having many life-size second generation photographs of parts of the Shroud as well as of the full length, from the Enrie negatives. These were processed and enlarged by Gamma Photographic Laboratories of Chicago, Illinois, who specialize in large scale photographs. Some of these were processed with the specific request to maximize the detail in the off-body areas since most prints which show the body image nicely tend to wash out the details in the other areas.

On standing some distance away from the photographs and looking at the off-body areas, it became apparent that many of them have definite patterning in an otherwise smudgy appearance. Many of these patterning look much like coronal discharge images, and Scheuermann quickly produced a large number of images using a variety of flowers, plants, and bouquets, including several plants wilted after picking.

We secured the definitive six volume set of Flora Palaestina, by Michael Zohary, and reviewed all of the drawings of the 1900 -plants depicted therein. We then attempted to match as well as possible the clearer plant images on the Shroud with those in the text. Then, using the drawings of those plants whose pollens Max Frei felt he had identified and which grow in Israel, we systematically searched the photographs of the Shroud to see if we could find images thereon which were compatible with those in the text. On the Shroud we are looking at the coronal-like images of partially wilted flowers often massed together. While with some of the plants we had only a flower image to go on, with some there was much more, including flowers, buds, stems, leaves, and fruits which are reasonably clear. We are fully aware that identification of many plants, especially when there are many species of a particular genus, can be difficult under the best of circumstances with the whole plant in hand.

We have done side by side comparison of images in all cases, and polarized image overlay comparisons in a number, to Show reasonable compatibility of the drawings of the plants from Flora Palaestina and what is seen on the Shroud.

FLORAL COIN AND OTHER NON-BODY IMAGES (contd)

We limited our study largely to those plants described in Flora Palaestina since there was no practical way to study all the possible species of some of the plants of which there are large numbers around the world. We have found no references to any similar type of plant images other than that by Dr. Jean Volckringer, who observed sepia colored images (not coronal type) on pages in books in which plants had been pressed for several years (Ref.), so the accuracy of plant identification from their coronal images has not been determined.

IV Results

While there are vague or partial images of hundreds of flowers on the Shroud, we feel that we have tentatively identified 28 plants whose images are sufficiently clear on the Shroud to make a good comparison and to be compatible with the drawings in Flora Palaestina.

Of course, the more information one has, the more confidently one can make an identification. Also, the fewer the different species of a particular genus, the more likely one would have access to data or drawings of all of them for comparison of appearance. The number of species of plants that we identified ranged from 400 for *Artimisia* to only one species in the genus for three plants, the *Gundelia*, the *Pteranthus*, and the *Ridolphia*. Later study of course may show some of our identifications to be incorrect. We offer photographic documentation of all our identifications, however, and welcome further serious study into these rather unique findings.

The tentatively identified plants whose images are on the Shroud are listed in the attached table as to the type of plant, whether it is found in Israel, whether it is found in Jerusalem, whether the pollen had been identified on the Shroud by Dr. Frei, when the flowering time is, and whether the plant is found in botanical Zone I (Euro-Siberian, which would include France) or Zone TV (Mediterranean, which might include Italy). Some of the plants are found in the Eastern Mediterranean (EM) Zone which includes Israel, Lebanon, and Turkey, but are not found in the Western Mediterranean Zone which includes Italy.

Of the 28 plants we identified on the Shroud, 23 are flowers, three are small bushes, and two are thorns. All 28 grow in Israel, and 20 grow in Jerusalem itself (i.e., in the Judean mountains). A rather unique situation exists in that within about 20 kilometers (12 miles) of Jerusalem are four other plant geographic areas, namely: the Shefela (representing Mediterranean territory), and the Judean Desert (JD) and the Dead Sea (DS) areas representing the three other areas which are the Irano-Turanean, Saharo-Arabian, and Sudanian penetration plant geographic areas (Ref.). Of the eight plants not growing in the climate of Jerusalem itself, all eight grow either in the Judean Desert or the Dead Sea area or in both. Hence these plants or flowers would be available in Jerusalem markets in a fresh state.

V. Pollens

Since we used Dr. Frei's pollen identification to search for those

FLORAL, COIN AND OTHER NON-BODY IMAGES (cont'd)

particular flowers, it is not surprising that a rather high percentage of the flower images that we identified have corresponding pollens found on the Shroud by Dr. Frei. We did note some possible discrepancies between his identification by means of the pollens and our identifications by means of the images on the Shroud. He identified a pollen as *Althea Officinalis*, but the closest match we could find was a rather similar plant named *Alcea*, probably the *Chrysantha*. He did not specify which species of the *Capparis* plants he felt were the source of the pollen, but we feel that the image on the Shroud is closest to the *Capparis Ovate*. He felt he identified the *Echinops Glaberrimus*; we feel what we identified is another species, probably the *Gaillardotii*. Dr. Frei identified another pollen as that of the *Artemisia Herba-alta*, but the flower and plant whose image we identified on the Shroud appears to be the *Artemisia Judaica*. He identified another pollen as that of the *Onosma Syriacum*, but the plant image more closely resembles the *Frutescens* species. As of yet, we have not been able to make comparisons between the pollen of these different species to see how closely they resemble one another. Of the 28 plants whose image we feel we have identified, Dr. Frei had already identified the pollens of 25 of them or, as mentioned, of other species of the same genus.

VI. Times of Flowering

From the description in Flora Palaestina we noted the times of flowering of the various plants. These times ranged between January and August, and spanned two to five months per plant. It is of great interest that 27 of the 28 plants bloom during March and April, which would correspond to the time of Passover and the Crucifixion.

VII. Location of Plants

Some species of plants have wide geographic distribution, so from our references we determined the ranges of the particular plants, noting especially whether they are found in central Europe, including France (botanical Zone I) or in the Mediterranean, including Italy (botanical Zone IV). Only 3 of the 28 plants are found in Zone I. Zone IV, the Mediterranean area, for a number of plants is broken into the Eastern (EM) zone, which includes Israel, and the Western zone, which includes Italy. Of the 28 identified plants, 9 are definitely found in Italy and 5 more are mostly found in the Eastern Mediterranean but might extend into Italy. To look at it from the opposite direction, half of the 28 identified plants are found only in the Middle East or other areas and never in Europe.

VIII. Age of Plants

The age of the flowers between the time they were picked and the time that the image was formed can be reasonably determined. While the nature and origin of the image formation process is still a mystery, the preponderance of evidence would indicate that the image of the body was formed in a very brief time by some type of high energy process sometime between 24 hours (the time

FLORAL, COIN AND OTHER NON-BODY IMAGES (cont'd)

required for the observed blood clot separation) and 40 hours after death when decomposition (which is not seen on the Shroud image) would have begun to be grossly apparent. As noted in our study of the wilting flowers, there are rapid changes that occur both in the appearance of the flowers as they dry and collapse and in the appearance of the coronal discharge images from the aging flowers. The more fragile flowers show rather marked wilting within the first 24 hours, but the more durable flowers undergo considerable shrinking between 24 and 36 hours after picking. Both the general gross appearance of the wilted flowers and the appearance of the coronal images would strongly suggest that most of the flowers whose images are on the Shroud would be between 24 and 36 hours old after picking. This finding corresponds well with the accepted physiologic and anatomic data from the Shroud.

The image formation of the flowers and other non-body objects may not be from the same mechanism which formed the body image. Dr. Igor Bensen, a research engineer with considerable experience in high voltage phenomena, observed that objects in a high energy field give off secondary radiation. Another researcher pointed out that flowers tend to discharge their pollen when electrically stimulated. The testing of these observations has yet to be done in regard to the Shroud.

IX. Use of Flower Images in Early Christian Art

We feel that there is ample early evidence of the presence of flower images on the Shroud, as flowers congruent with the Shroud images were portrayed in numerous works of art. One of the earliest portraits of Christ in the 3rd century in the Roman catacombs shows a patterning around the head very similar to the flower-banked facial image in the Mandylion frame. Small flowers are evident on each side of the facial image. Another portrait of Christ from the early 4th century in a Roman catacomb which has about 150 points of congruence with the Shroud face image shows a number of flower images in the nimbus or halo. The Pantocrator icon of St. Catherine's Monastery at Mt. Sinai, probably produced about 550 at Edessa at the request of Byzantine emperor Justinian I, is the most accurate of the many portraits we have studied which have been derived from the image on the Shroud and which has over 250 points of congruence with it. In the halo of this icon are many dozens of images of flowers which are highly congruent with those on the Shroud of Turin. Even more striking are the very accurate copies of the images of the flowers on the Shroud on the gold solidus coins of Justinian II struck 692-695. These coins are the first to bear the portrait of Christ, and are numismatic icons (Ref.). The height of the face image on these coins is 8 to 9 millimeters (about 3/8 inch), and the flower images would easily fit on the head of a pin, yet they are highly congruent with the Shroud images. Flowers were accurately portrayed on the gold coins of Constantine VII in 950 after the Mandylion, which was the Shroud folded and mounted in a frame, had been brought in great ceremony to the Chapel of the Emperor in Constantinople.

The multiplicity of the portraits of Christ during the 3rd to the 10th centuries which contain highly accurate depictions of flowers indicates that in the early years of the Shroud the floral images were quite vivid. It is not clear when or how the images of the flowers became so indistinct or

FLORAL, COIN AND OTHER NON-BODY IMAGES (cont'd)

imperceptible as to be essentially unperceived or ignored by the onlookers. Our visual mechanisms tend to suppress very faint or low contrast images so as to sharpen our vision (Ref.). Techniques which enhance the contrast of these faint images help us to see them better. Since they are fragmentary, the polarized image overlay technique or a simple comparative overlay help us to perceive them by providing a template or comparison. As with reading X-rays, experience in looking at faint images helps one to better perceive the information therein.

X. Summary

On the Shroud of Turin are images of large numbers of flowers and plants which closely resemble images that are made by a coronal type of energy discharge. These images are faint and generally of low contrast, and are of partially wilted flowers and plants bunched together, which makes them difficult to perceive without some photographic or computer enhancement, or without a comparative template of some sort. A number of these images, which may include not only the flowers, but in some cases also buds, leaves, stems, and fruit, can be recognized by comparing them with botanical drawings.

We feel we have made tentative identification of 28 of these plants, which we have photographed in detail. Of these, all 28 grow in Israel either in Jerusalem itself or in the nearby desert or Dead Sea areas. Using material taken from the Shroud on sticky tapes pressed into its surface which picked up hundreds of pollens and other particles, Dr. Max Frei was able to identify at least 58 different pollens on the Shroud. He had already identified pollens from 25 of the 28 plants whose images we have identified, with some variability in a few of the species.

Research on both the general appearance and coronal images of wilting flowers would indicate that the images on the Shroud were formed probably between 24 and 36 hours after the flowers were picked. The flowering time of 27 of the 28 identified flowers includes March and April.

These flower images on the Shroud were obviously much more visible in the earlier centuries of the Shroud's existence, since they have been highly accurately copied in a number of the early iconographic and other artistic depictions of Christ in many media including Byzantine coins between the 3rd and 10th centuries.

These observable data on the flower images and the pollens from the Shroud in addition to vast information from other sources indicate that the conclusion of the carbon dating studies of 1988 that the Shroud of Turin is of medieval (i.e., 13th or 14th century) origin is anomalous and erroneous, and that the Shroud origin is Israel in the first century. The Shroud is continuing to reveal new information and mysteries.

FLORAL, COIN AND OTHER NON-BODY IMAGES (cont'd)

PLANT IMAGES TENTATIVELY IDENTIFIED ON THE SHROUD OF TURIN
by Dr. & Mrs. Alan D. Whanger as of August, 1989

F = Flower		Y = Yes	? = Uncertain	JD = Judean Desert	EM = Eastern Mediterranean			
B = Bush		N = No	S = Species	DS = Dead Sea Area	(found predominantly in Israel, Lebanon, and Turkey; hence not likely Italy)			
T = Thorn								
Zone I = Euro-Siberian: , i.e., possibly France)								
Zone IV = Mediterranean: i.e., possibly Italy)								
	Plant - Genus/Species*	Type of Plant	Found in Israel	Found in Jerusalem **	Pollen Found on Shroud by Frei	Flowering Time	Those potentially found in Europe	
							Zone I	Zone IV
1.	Alcea *** ? chrysantha c.60 S - 9 S	F	Y	? ,Y (also desert)	Y (althea S)	Apr-May	N	N
2.	Anemone coronaria c.120 S - 1 S	F	Y	Y	Y	Jan-March	N	Y
3.	Anthemis ? palestina 150 S - 23 S	F	Y	Y	N	March-June	N	?S
4.	Artimisia Judaica c .400 S - 45 S	B	Y	N (JD)	Y,S	March-April	N	N
5.	Capparis ovata c.350 S - 4 S	F	Y	Y	Y	Apr-Aug	N	N (arid EM)
6.	Chrysanthemum coronarum 5 S- 4 S	F	Y	Y	N	March-May	N	Y
7.	Cistus creticus c. 20 S - 2 S	F	Y	Y	Y	March-June	Y	Y
8.	Echinops ? gaillardotii 100 S - 6 S	T	Y	? ,Y (also JD, DS)	Y,S	June-July	N	?N (mostly EM)
9.	Fagonia mollis 40 S - 7 S	F,T	Y	N (JD, DS)	Y	March-April	N	N
10.	Glaucium grandiflorum c. 20 S - 5 S	F	Y	Y	Y	March-May	N	N
11.	Gundelia tournefortii 1 S-1 S	T	Y	Y	Y	March-May	N	N
12.	Haplophyllum tuberculatum c. 65 S - 5 S	F,B	Y	N (JD, DS)	Y	March-April	N	N
13.	Helianthemum versicarium c. 100 S - 12 S	F	Y	Y (JD)	Y	Jan - May	N	N
14.	Hippocrepis multisiliquosa	F	Y	Y	N	March-May	N	?N

FLORAL, COIN AND OTHER NON-BODY IMAGES (cont'd)

	Plant - Genus/Species*	Type of Plant	Found in Israel	Found in Jerusalem **	Pollen Found on Shroud by Frei	Flowering Time	Those potentially found in Europe	
							Zone I	Zone IV
15.	<i>Hyoscyamus aureus</i> c. 20 S - 5 S	F	Y	Y	Y	March-June	N	?(EM)
16.	<i>Hyoscyamus reticulatus</i> c. 20 S - 5 S	F	Y	N	Y	Feb-April	N	N
17.	<i>Linum mucronatum</i> c. 200 S - 9 S	F	Y	(JD)	Y	March-May	N	N
18.	<i>Oligomerus subulata</i> 8 S-1 S	B	Y	N (JD,DS)	Y	March-May	N	N
19.	<i>Onosma ? syriacum or frutescens</i> c. 150 S - 4 S	F	Y	?Y (also S in JD and DS)	Y,S	? March-June	N	N
20.	<i>Paliurus spina-Christi</i> 8 S-1 S	F,T	Y	Y	Y	April-June	N	N
21.	<i>Pistacia lentiscus</i> 9 S - 5 S	B	Y	Y	Y	March-April	N	Y
22.	<i>Prosopis farcta</i> c. 30 S - 1 S	F,B	Y	N	Y	April-August	N	?N (EM)
23.	<i>Pteranthus dichotamus</i> 1 S-1 S	F	Y	N (JD, DS)	Y	Jan-April	N	N
24.	<i>Reaumuria hirtella</i> c. 20 S - 3 S	F	Y	Y	Y	March-July	N	N
25.	<i>Ridolfia segetum</i> 1 S-1 S	F	Y	Y	Y	April-June	Y	Y
26.	<i>Roemeria hybrida</i> 6 S- 2 S	F	Y	Y	Y	Feb-April	N	Y
27.	<i>Scabiosa prolifera</i> c. 100 S - 6 S	F	Y	Y	Y	March-May	N	Y
28.	<i>Zygophyllum dumosum</i> c.100 S - 5 S	F	Y	N (JD, DS)	Y	March-April	N	N
Totals								
	28		28	20	25	27 March-April blooming	3Y	9Y, 5?

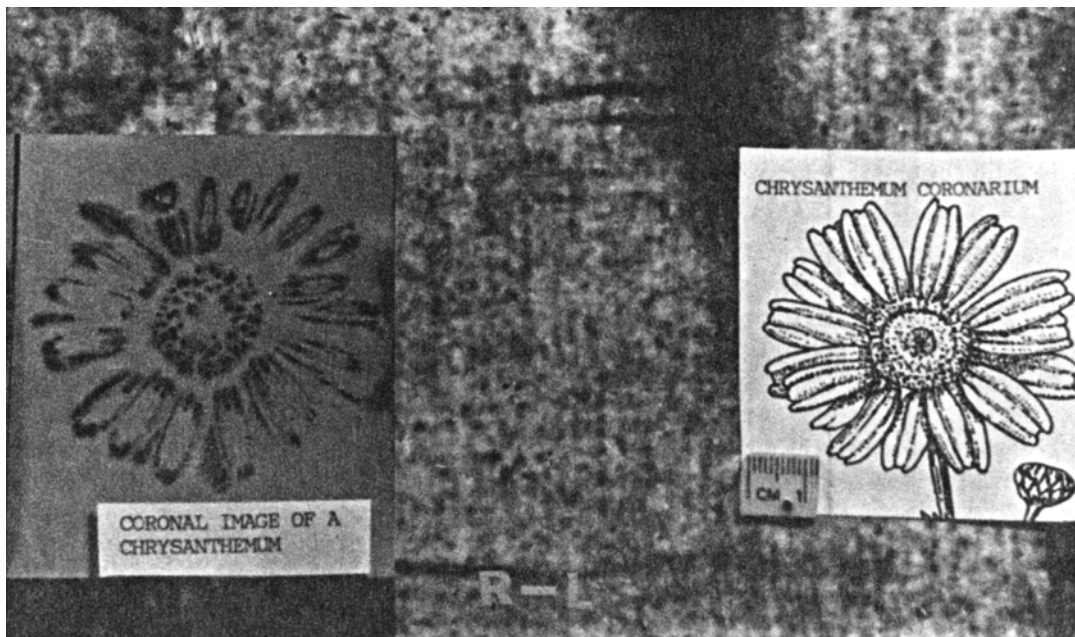
FLORAL, COIN AND OTHER NON-BODY IMAGES (cont'd)

Notes:

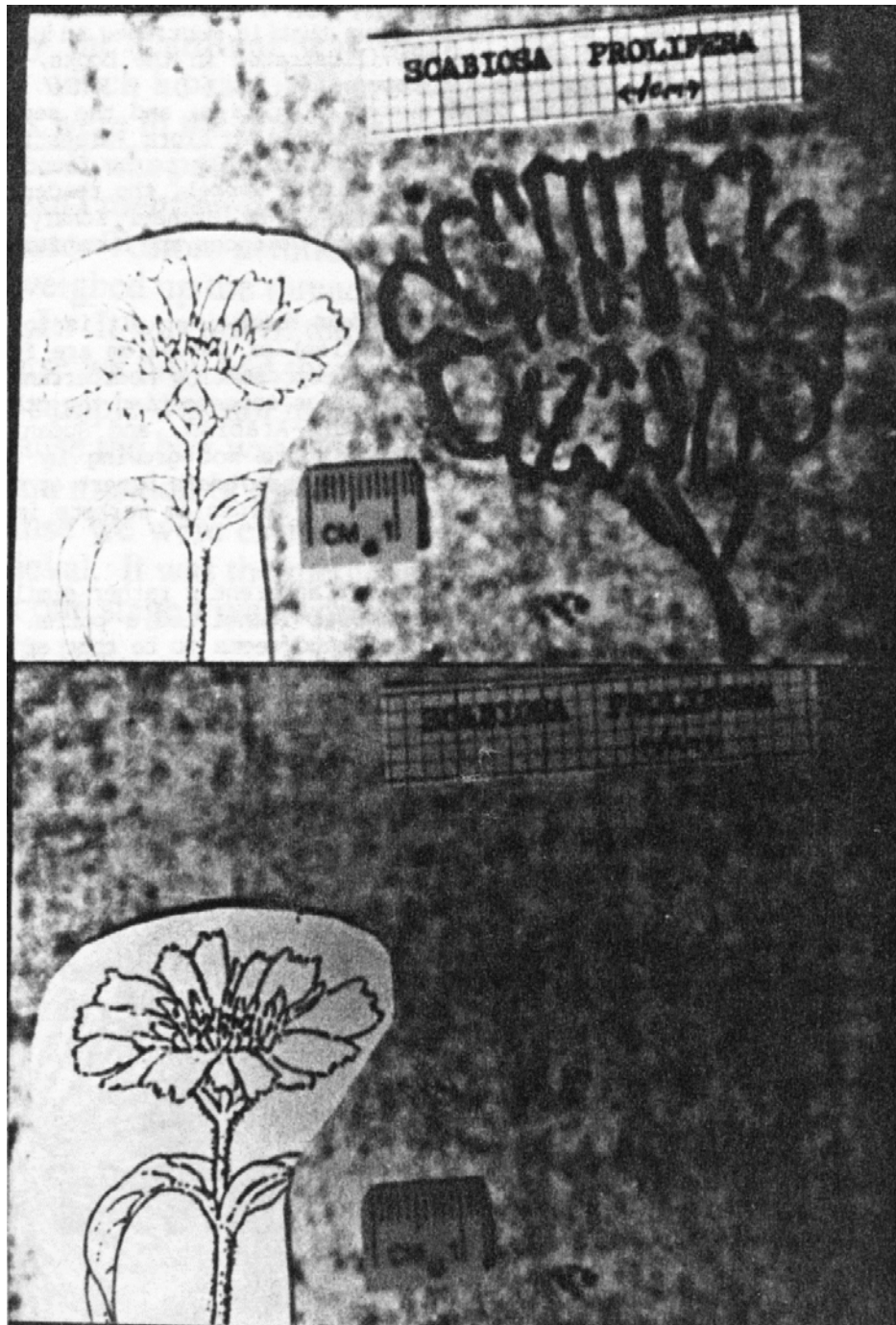
* The total number of species in a particular genus that is mentioned in *Flora Palaestina* is indicated. Not all of these are illustrated in the books, nor are they all found in Israel. They are indicated thus: c. 60 S - 9 S. The first figure indicates the approximate total number of species, and the second figure indicates those actually described and illustrated in *Flora Palaestina*, which presumably would indicate those most likely or certainly to be found in Israel. For the exact distribution and frequency within Israel, the reader is referred to the texts. (Reference: *Flora Palaestina*, by Michael Zohary, 3 Parts, published in Jerusalem by the Israel Academy of Sciences and Humanities, 1966-1977.)

** Those listed specifically as growing in the Judean Mountains. It is to be kept in mind that within about 20 kilometers (12 Miles) of Jerusalem are four other plant geographic areas, namely: the Shefela (representing Mediterranean territory), and the Judean Desert and the Dead Sea areas representing the other three areas which are the Irano-Turanian, Saharo-Arabian, and Sudanian penetration plant geographic areas. Of the eight plants not growing in the climate of Jerusalem itself, all eight grow in either the Judean Desert or the Dead Sea area or both, and hence would be available in Jerusalem markets in a fresh state.

*** There are about 12 species of *Althaea*, which are apparently rather similar to *Alcea*, of which there are about 60 species. Frei identified a pollen as *Althaea officinalis*, but the flower image on the Shroud seems to be that of an *Alcea*.



FLORAL, COIN AND OTHER NON-BODY IMAGES (cont'd)



THE RIDDLE OF THE DEAD SEA SCROLLS - Review by Rex Morgan

In recent years the Australian Broadcasting Commission has become a law unto itself and despite being government owned, and therefore totally funded by taxpayers, and theoretically the servant of the people, spends much of its time peddling revolutionary themes, showing programmes to destabilise the community, beating up very inconsequential "news" items and naive comment thereon, besides, oddly, broadcasting quite excellent classical music programmes on its more "conservative" radio stations.

It was no real surprise, then, to find the ABC sponsoring and producing, at great expense and with all its first-rate technical mastery and resources, a programme for prime-time viewing at Easter this year about the Dead Sea Scrolls.

This presentation, *The Riddle of the Dead Sea Scrolls*, prefaced by weeks of preliminary audience hype, was technically superb and very beautifully made but explored the quite eccentric views of one Dr Barbara Thiering which could be summed up as:

1. The Dead Sea Scrolls do not date to the 2nd century BC as is believed by every other scholar in the field.
2. The two main characters in the Qumran Scrolls are John the Baptist and Jesus Christ.
3. By applying the "pesher" technique of interpreting the bible Thiering unveils her whole new meaning of the New Testament revealing Qumran as the centre of a 1st century Christianity reforming movement.

She goes on, by circular argument and irrational illogicality to dismiss the miracles and the mythology and virtually every traditional aspect of the life of Christ including making the assertion that the Ascension was no more than Jesus's return to Qumran, there to live in obscurity to a ripe old age.

The TV programme and subsequent radio discussions properly invoked a great deal of heated debate and indignation from informed biblical and theological scholars of many denominations worldwide. Here are some of the published comments:

"Insensitive of the ABC choosing Palm Sunday as a time for screening." "Widespread concern from people of many backgrounds."

"Surely this must sound a warning to all who would re-interpret, alter and interfere with God's Holy Word."

"More offensive to Christians than Salman Rushdie's book was to Muslims." "Views not supported by any responsible scholar."

"Cleverly presented academic mumbo-jumbo which, regrettably, might easily take in the uneducated."

"Uninformed, irresponsible, bizarre, outlandish and gratuitously slanderous."

THE RIDDLE OF THE DEAD SEA SCROLLS (cont'd)

"Beyond belief"

"Her final proposals concerning the real Jesus have no persuasive value."

"The recourse to theories of secret traditions and hidden plots has been a hallmark of the Gnostic, the schismatic and the heretic."

"A convoluted account of the meaning of the Gospels."

"Hopelessly far-fetched."

"Not just nonsense, but dangerous nonsense."

"Views totally unacceptable to all Christian churches."

"Dr Thiering cannot possibly be correct."

Allowing a woman of Thiering's reputation (at worst she is demented, at best a pathetic academic poseur) the resources and opportunity to present such garbage so convincingly has its parallels in the media's treatment of the Shroud.

The very narrow, very rare and unsupported (if not often downright dishonest) pieces of "evidence" for the Shroud's being a forgery (e.g.: the unauthenticated draft of the D'Arcis letter; the McCrone privately published claims for paint; the single C14 test thus far unsubstantiated and incompletely recorded or published) always command well-made TV programmes, worldwide radio interviews, news items and print headlines. The masses of scientific and historical evidence to the contrary occasionally gets a look-in in all too brief and cynical magazine-type programmes in most media but too late to undo the impact of the punchy Shroud one-liners brayed forth by the juvenile moguls of public opinion.

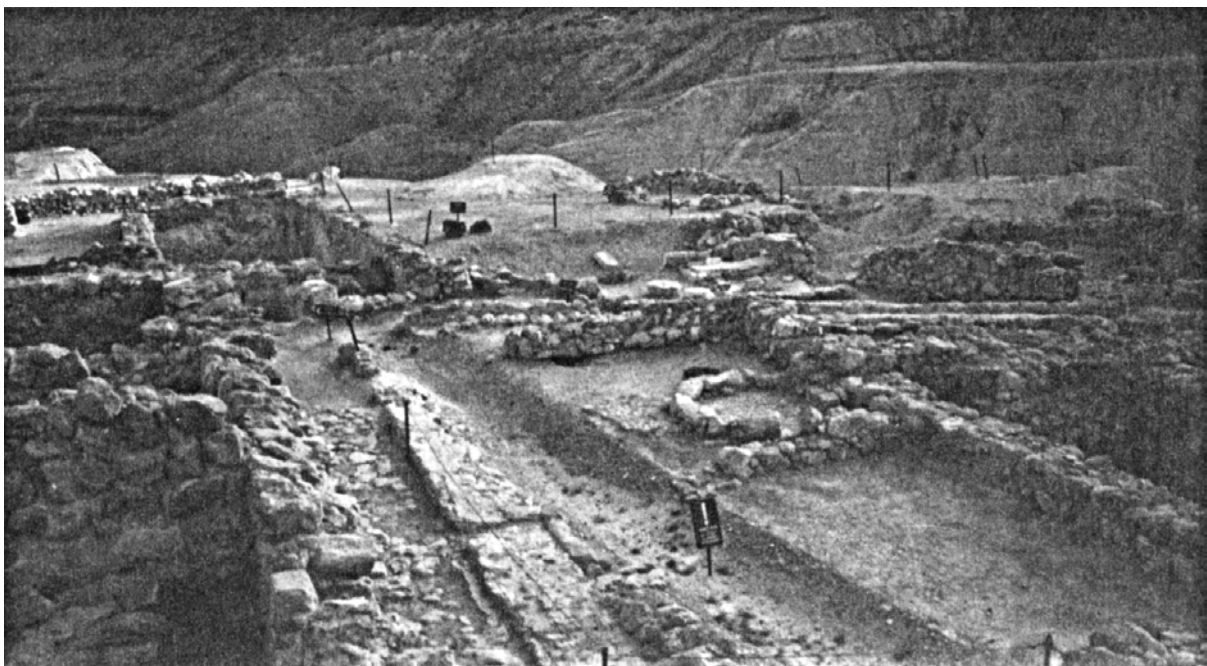
The Riddle of the Dead Sea Scrolls was an important 90 minute demonstration of what you can achieve through national media if you have enough influence in the right places as this self-proclaimed anti-Christianity lecturer in theology (not surprisingly a divorcee from her Anglican priest husband) seems to command in Australia.



QUMRAN - The Dead Sea in background



QUMRAN - The Scroll Cave



QUMRAN - The site of the settlement

(Pics: Rex Morgan 1986)

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*) started putting together a few notes about current developments in Sindonology (the study of the Shroud of Turin) for a small circle of interested people in his home country of Australia. He didn't expect it to go beyond a few issues.

The bulletin now reaches subscribers all over the world and it is written and produced and the information disseminated more quickly than most news-sheets of a similar kind or the more prestigious Shroud publications. 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 and this has given 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 with numerous Shroud researchers in many countries. His quest for Shroud information became, as he described it, "a passionate hobby". He brought 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 Institute 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 member of the Board of Directors of the USA 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 (The Environmental Study of the Shroud in Jerusalem). He has made several original contributions to the research of the Shroud, has presented papers at international conferences, has written many articles and given numerous broadcasts and telecasts on the subject in many countries.

The list of *Shroud News* subscribers continues to increase internationally and the publication has been described many times as one of the best available. Its production is obviously privately subsidised as we still request a subscription in Australia of only \$6 for six issues posted. *Shroud News* comes out six times per year. The USA subscription is \$US 6 (posted surface mail) or \$US 12 (posted airmail). Postage to other countries varies. ALL back issues are available at \$1 (US or Aust) each plus postage charges except the famous 50th issue which is \$3 plus post.

Please encourage those of your acquaintance to take out their own subscription rather than borrow your copies since the more genuine subscribers we have the more we can improve the bulletin and the longer it is likely to survive.

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