

A NEWSLETTER ABOUT THE HOLY SHROUD OF TURIN
edited by REX MORGAN, Author of several books on the Shroud
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YET ANOTHER FACE OF CHRIST WHICH APPEARS TO HAVE THE CHARACTERISTICS OF THE FACE ON THE SHROUD. IT IS DESCRIBED IN THE LIMASOL CASTLE MEDIEVAL MUSEUM, CYPRUS, WHERE IT IS TO BE FOUND, AS A REPLICA OF A WALL PAINTING OF THE CISTERN OF NICODEMUS IN SALAMIS 6th CENTURY A.D.

PIC: Dr DAMIAN

EDITORIAL

It has been pleasing to have received a number of laudatory messages about the last issue, August 1992, which I devoted entirely to a tribute to Group Captain Lord Cheshire, Shroud advocate extraordinary, who died this year. Amongst others, Revd Fr John Conliss of Japan writes:

"Thank you for an excellent obituary of Leonard Cheshire, it deserves wide diffusion to honour the man and to honour the Shroud that inspired him. I feel sure that not only his work and writings that he 'left behind him' will carry on his mission but that he himself, in that final dimension of great men, is more at work than ever. May we too join him one day."

In this issue is another important article by Belgian Remi van Haelst who continues his relentless pursuit of the truth of the C14 testing of 1988. There is also an interesting article which came to me in the form of a pamphlet issued in America and which contains a very good summary of the present position, *Why the Shroud of Turin may be Genuine After All*. I have reproduced an amazingly bad chapter about the Shroud from a pulp book and there is a report of the visit by Vernon Miller to Melbourne earlier this year.

The death of Dr Joseph Gambescia is announced in the United States. In November the brilliant Isabel Piczek will be receiving a Papal Honour, the Laudatus Award, and she then goes to London to give a paper at the British Society for the Turin Shroud followed by a week in Rome including dinner with the full staff of the Pontifical Biblical Institute. She hopes to do a good deal of spadework for the cause of the Shroud.

A German friend, Baroness Birgit Bergen, has recently delivered *Shroud News* and my Shroud books to the Vatican and when I visited my old friend, Arthur C. Clarke, (2001 etc) at his home in Colombo, he asked for more information on the Shroud than he already had. It is good to know that all over the world the interest in this amazing subject continues unabated, at least amongst the *cognoscenti*.

REX MORGAN

WILL THE BRITISH MUSEUM FINALLY OPEN ITS SHROUD FILE?**- REMI VAN HAELST, Belgium**

Remi Van Haelst, analytical chemist by profession, author of *Het Gelaat Van Kristus - De Lijkwade Van Turijn*, (Antwerp 1986) has been a relentless protagonist for the publication of the raw data of the 1988 C14 tests. He has written numerous articles about his own analysis of the published results and has shown time and again that the only official results (published in *Nature*) (see *Shroud News* No 52) are inadequate and that aspects of the testing appear to have been concealed. He has had little success in corresponding with the three laboratories which were involved and seems to have partially uncovered some kind of conspiracy which baffles all Shroud researchers. Here is an article bringing us up to date with his work.

Ever since the announcement of the radiocarbon dating results on the Shroud sindonologists have tried in vain to obtain the complete set of data provided to the British Museum by the laboratories which undertook the testing programme. It is important to know that AMS radiocarbon dating is not based on a SINGLE measurement but on a number of runs (up to 4) with a certain sequence (between 10 to 20). This means that the Shroud has been dated not 12 times (table 1 *Nature* report) but between 120 and 1280 times! This indicates the importance of the data used in the statistical analysis, since the standard error is a function of the number of measurements. The more measurements, the smaller the error, the larger the scatter.

For example: A standard error of 61 based on 4 runs, sequence 20, indicates a scatter of results of +/-545 years, assuming a normal distribution. This will place some of the results into modern times. In the case of a non-normal distribution some outliers may even indicate a date in the time of Christ.

This is the reason why the complete RAW data should be published by the British Museum and the laboratories. Dr Hedges refused to publish the Oxford raw data, even to other radiocarbon experts. I re-worked the statistical analysis following the data presented in *Nature*. During the Paris Symposium 1990, I asked Dr Tite of the British Museum the meaning of my results and he declared himself incompetent in the matter. I have to say that he kept his promise to seek the advice of Dr Morven Leese of the British Museum, an author of statistical analysis, who agreed with the results of my work. Some of my work has been used in recent books on the Shroud by eminent sindonologists like Dr van Oosterwyck, Dr Baima Bollone and Prof Emanuela Marinelli.

THE BRITISH MUSEUM SHROUD FILE (cont'd)

After receiving some confidential information about the shape of the Arizona sample and the combination of the original EIGHT data into FOUR I asked the British Museum and Dr Donahue (Tucson) for some explanation. Dr Donahue did not reply.

Dr Tite's reply was rather strange: He said, "The statement, 'From a strip of about 10 x 70 mm were cut THREE parts of about 50mg in weight' was written from memory." Dr Bowman (British Museum) made the remark that "about 10 x 70 mm" indicates that the measurements are not exact. Certainly, I know very well that "about 10 x 70 mm" means +/- 1 mm, but nevertheless it remains IMPOSSIBLE to cut THREE samples of about 1.3 x 1.6 cm out of a strip of 10 x 70 mm. Oxford and Zurich took photographs of samples this size!! Dr Bowman explained that the difference in size and weight could be caused by differences in temperature and humidity! She did not comment on the fact that Arizona indeed received a sample in TWO parts. Dr Hedges (Oxford) agreed that he now realises it would have been better to have given a more accurate description of the samples. He asked me in a later letter not to publish this statement ... letting me know that our correspondence was ended!

Dr Bowman and Dr Leese gave a different interpretation about the application of the 13C correction and how the Arizona results 646 (Table 2) WITH a 13C was obtained, based on the data presented, WITHOUT a 13C. In table 1, based on Table 1 data, one obtains the same date 646 which cannot be correct. One should obtain ~639. The simplest way to explain the matter was to show on paper how it was done.

Dr Leese also explained that the FOUR Arizona data (Table 1, *Nature*) are in fact INDEPENDENT data obtained by the combination of FOUR PAIRS of DEPENDENT data, using the same standard samples. But he did not explain why this was not noted in *Nature* and kept it secret until an Arizona scientist made it known...

To show the importance of the publication of ALL data I will make the basic *t*-test which indicates the SIGNIFICANCE of the data. In my Perry's *Chemical Engineers' Handbook*, my professional bible for many years, it is noted clearly: "Before a statistical test is applied the level of significance must first be selected."

Original Arizona data (not published in *Nature*) all calculations based on scatter. Max *t* value for 8 data and 97.5% confidence = 2.365. Max *t* value for 4 data and 97.5% confidence = 3.182.

THE BRITISH MUSEUM SHROUD FILE (cont'd)

	606	574	753	632	676	540	701	701	Mean 648	S.E. 25.56
<i>t</i>	1.64	2.89	4.11	0.62	1.10	4.22	2.08	2.08		
	591	690	606	701				Mean 647	S.E. 28.26	
<i>t</i>	1.98	1.52	1.45	2.08						

Example $(648 - 540) / 25.56 = 4.22$

Since the calculated *t* value, based on 8 data is GREATER than 2.365 the hypothesis that the true mean = 648 is rejected. Based on 4 data the calculated *t* value is SMALLER than 3.182 and therefore the hypothesis that the true mean = 647 is not rejected.

This shows clearly why the original Arizona data were not published! The same goes for the comparison of the final results of each laboratory versus the general mean. Without any scientific justification, the error obtained on the basis of quoted errors (Wilson-Ward) jumped from 16 to 31, calculated on the basis of the scatter. In spite of this "selective" mixing of methods, the X² test value 6.4 is still LARGER than the critical value 5.99 for 95% confidence. An X² test value of 6.4 is NOT CONCORDANT with a significance of 5%, the minimum acceptable level (Table 2, *Nature*). Dr Leese did not comment on this. On every occasion I asked Dr Leese to show me his calculations on paper. Instead of this I received only some indefinite information. Finally I received a letter from the Board of the British Museum in which, to my surprise, it was stated that I had received FULL replies to my questions and that our correspondence was ended.

In view of a lecture to be held before the forthcoming International Shroud Symposium (Rome 1993) I asked Dr Leese to give me access to the files of the British Museum. Dr Leese agreed on the condition that I obtained the permission of the laboratories. I contacted all parties involved. None of the three laboratories, nor Mgr Saldarini of Turin, nor the Vatican, answered my letters. The only positive reaction came from Professor Bray of Turin. He gave the British Museum his permission to publish their correspondence concerning his review of the statistical analysis made by Dr Leese. Professor Bray was, in fact, one of the few people who saw the report made up by the British Museum. But in spite of his positive reaction the Museum has, until now, NOT PUBLISHED the correspondence.

Finally, I should like to state my queries to the British Museum:

THE BRITISH MUSEUM SHROUD FILE (cont'd)

A. The reason why blind testing was abandoned. Blind testing is the basis of all comparison surveys because it eliminates "unconscious and/or conscious biasing". In fact the identification of the blind samples should be done only AFTER the results are published. The reason for abandoning blind testing given in the *Nature* report as, "anyone would recognise the Shroud" was not serious. Professor Raes, the textile expert who examined Shroud samples in his laboratory could only establish small differences between the Shroud and the side strip.

B. An explanation about the differences in size, weight and shape of the samples. One seems to forget that CERTIFIED sample taking and handling is the most important part of any analysis.

C. An explanation about the fact that none of the laboratories reported contamination of the samples whereas in ALL other reports, Raes, Frei, Maloney and Riggi-Testore mention contamination (pollen, fungi, etc). Maloney did more than 500 hours research on the Frei samples. Dr Wolfli assured me that he could not detect, under the microscope, any contamination on the Zurich Shroud sample. One may wonder why he did not make any reservation at all. Also the presence of a thread of "old Egyptian cotton" in Oxford and a red thread in Arizona are NOT mentioned in the *Nature* report.

D. The publication of the full RAW data of each laboratory.

One can only hope that the British Museum and the laboratories involved will finally cooperate to establish the truth once and for all.

* * * * *



- REMI VAN HAELST, Belgium

THE RELIQUARY OF THE HOLY SEPULCHRE, PAMPLONA

This notice will be followed by an article on the details of the reliquary and relics it contains, preserved at Pamplona, Spain.

It is well known that one end of the Shroud's side strip is c. 6 inches short, and the other end c. 15 inches short, of the full length of the main cloth - these missing sections were detached to become relics. It is also recorded that Baldwin II of Constantinople ceded relics of the Passion to Louis IX, and in particular part of the Shroud, in 1247.

This 'part', if from the Shroud, could only have come from the side strip.

The search for remains of the missing corners led me to Pamplona Cathedral, where is kept the Reliquary of the Holy Sepulchre, thought to be late 13th century, and connected with Ste-Chapelle, Paris. The reliquary contains several cloth relics, a stone, manuscript and labels, etc. These relics were associated with the Holy Sepulchre, and amongst them is what looks like a small piece of rolled-up linen, which was not easy to see through the crystal cover; so it was not possible to determine with accuracy the weave of the cloth. (The roll of cloth is obscured under another piece of linen which may or may not be of the same roll; but this visible piece does not show a distinctive twill weave similar to the Shroud.)

Since my visit to Pamplona in April 1992, the reliquary has been opened; and this will enable the rolled-up linen to be seen clearly, as well as the labels and manuscript, and these should reveal some interesting information in any event.

CUBIT RODS EXIST THAT MATCH THE SHROUD DIMENSIONS

A correct scientific measurement exists to match the Shroud's true age and provenance - cubit rods are extant under the classification of Jewish and Assyrian usage of 21.4 inches, period Graeco-Roman: the Shroud measures 8 by 2 Jewish cubits with accuracy and precision. Two intact cubit examples lie in the Petrie Museum, and another in the Science Museum, London. One owner of c. 2,000 years ago has left his name incised in Greek on his cubit rod - he was ANOUTI.

Also, more information is to come on how the Shroud was kept, and the evidence points to a time before the Shroud appeared in Lirey, France.

Canterbury, 30th October, 1992

Ian Dickinson

SHROUD PHOTOGRAPHER IN MELBOURNE

- REX MORGAN

In the early months of this year Professor Vernon Miller of Brooks Institute, California, spent a period of time as a visiting professor and Polaroid Research Fellow at the Royal Melbourne Institute of Technology. During this period he taught classes in the Department of Photography and made several location tours of parts of Australia. Vern Miller is the senior professor at Brooks Institute which is the world's foremost university of photography located at Santa Barbara, California. Of greatest significance to the Shroud world is that Miller was the principal photographer at the STURP examination of the Shroud in Turin in 1978. Virtually every modern picture of the Shroud and of the work done in 1978 (all those familiar and plagiarised pictures of equipment so beloved by the media) are nearly all Miller's work. I was fascinated to learn back in 1983 when my best-selling pictorial book *Shroud Guide* was published containing a number of photographs by Miller and Ernest Brooks that I was one of the very few authors who had ever paid the copyright fees to the photographers. Most other authors of Shroud books, and almost every Shroud book contains the work of Brooks and Miller, simply used the photos.

Following the 1978 examination Miller became one of the most significant Shroud experts in the world having photographed the cloth under all conditions and using numerous lighting and other techniques. He was widely interviewed for years subsequently and was involved in all the assessment of the work of the STURP team.

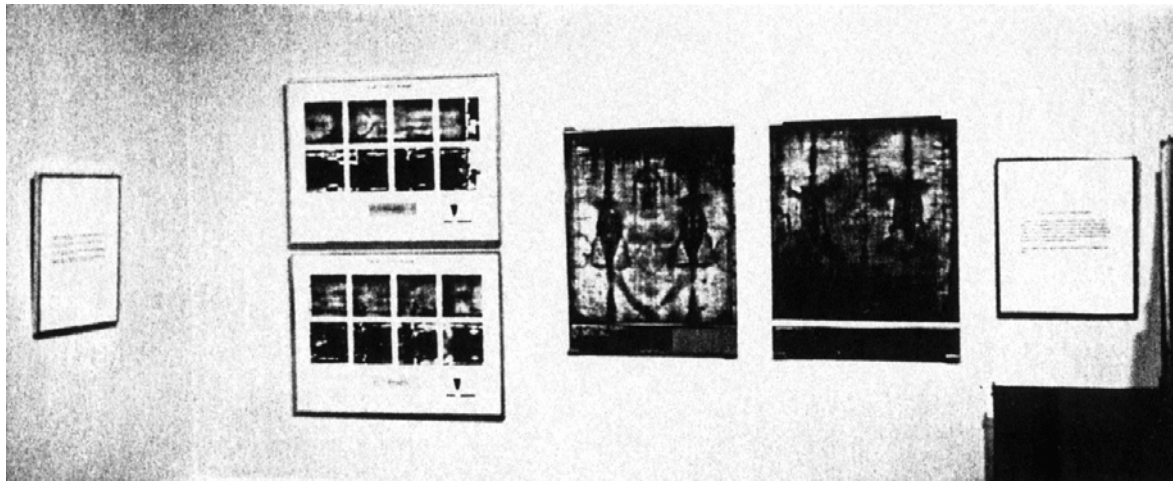
Coincident with Miller's visit to Melbourne I had been asked to release the Photographic Exhibit which is in my care and was originally presented to the South East Asia Research Centre for the Holy Shroud (SEARCH) by Ernest Brooks himself several years ago. I am, these days, very wary of who gets their hands on this unique and valuable exhibition especially after one or two bad experiences such as the Albury Rotary Club and the South Australian Institute of Technology. Nevertheless Professor Gale Spring of RMIT [Royal Melbourne Institute of Technology] undertook all the required precautions and conditions and in due course the exhibit was sent to Melbourne for public exhibition at the Institute in the centre of the city. Vern Miller had given one or two lectures on the Shroud in Melbourne mainly to audiences put together by Institute sympathisers and a few who had been rounded up by Paul Smith and his group.

SHROUD PHOTOGRAPHER IN MELBOURNE (cont'd)

Regrettably there was no publicity generated for the exhibition at all and it wasn't even mentioned in the one mediocre press story on Miller. At the "official opening" I doubt that fifty people attended. The Institute staff had done an excellent job of mounting, and in some cases framing like gallery pictures, many of the photographs. All of the images I have assembled in the past ten years updating the exhibit and which are not the work of Brooks photographers were eliminated. The result was an arty display of Vern Miller rather than an exhibition about the Shroud, the importance and significance of which must have escaped the Institute, I rather feel. Despite the considerable expense borne to prepare and send the exhibit to Melbourne SEARCH was not allowed to offer any material for sale (as we do at every exhibit to defray costs) and I was never told how many people ever visited the thing.

I was there for the "official opening" and this proved to be valuable for two reasons. First, I was able to renew my acquaintance with Vern Miller after many years and secondly, I met with several Shroud friends from Melbourne. Not the least of these was Paul Smith and members of his family, all of whom are involved in Shroud Support activity. I also met Keith Claughton, a Melbourne Shroudie who was present in Turin in 1978. Keith has generously offered to create an up to date index for *Shroud News*.

So whilst this exhibition will not go down in the annals as an occasion of any significance in the history of the Shroud it was good that a few Melburnians were able to be exposed to some of the magnificent photos again but it was a far cry from the heady days of 1984 when 12,000 people lined up in the streets, waiting for hours to get into the exhibit in the Commonwealth Bank building and we spent every day doing media interviews on the subject. But, if nothing else, the pictures looked nice in the Institute's picture gallery.



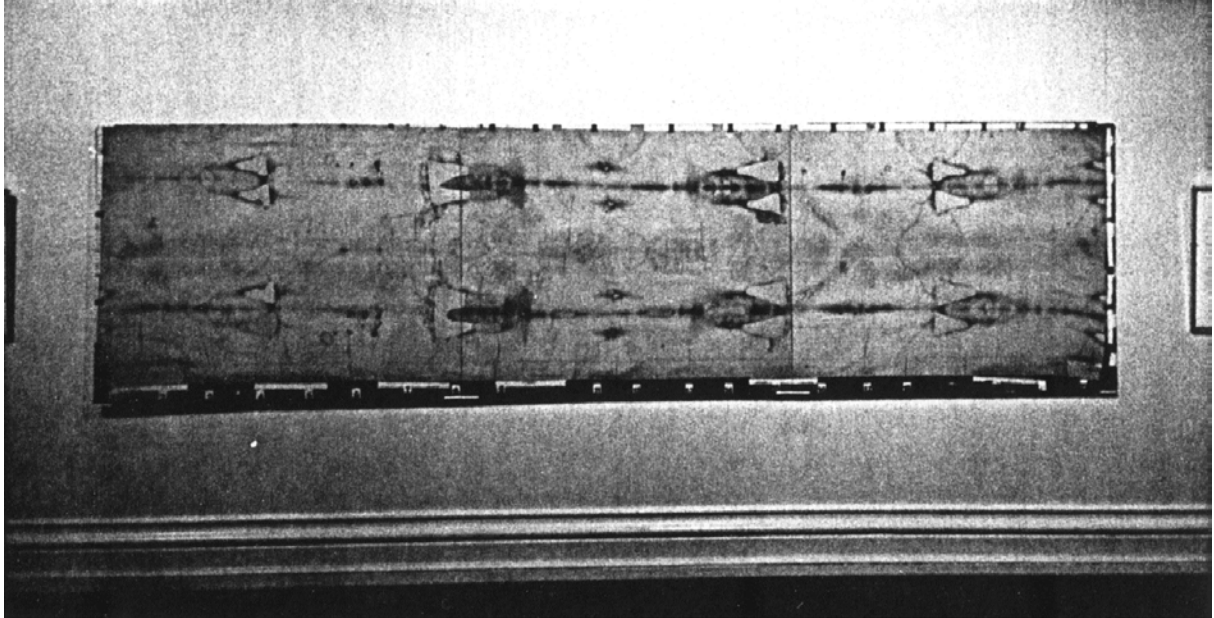
SHROUD PHOTOGRAPHER IN MELBOURNE (cont'd)



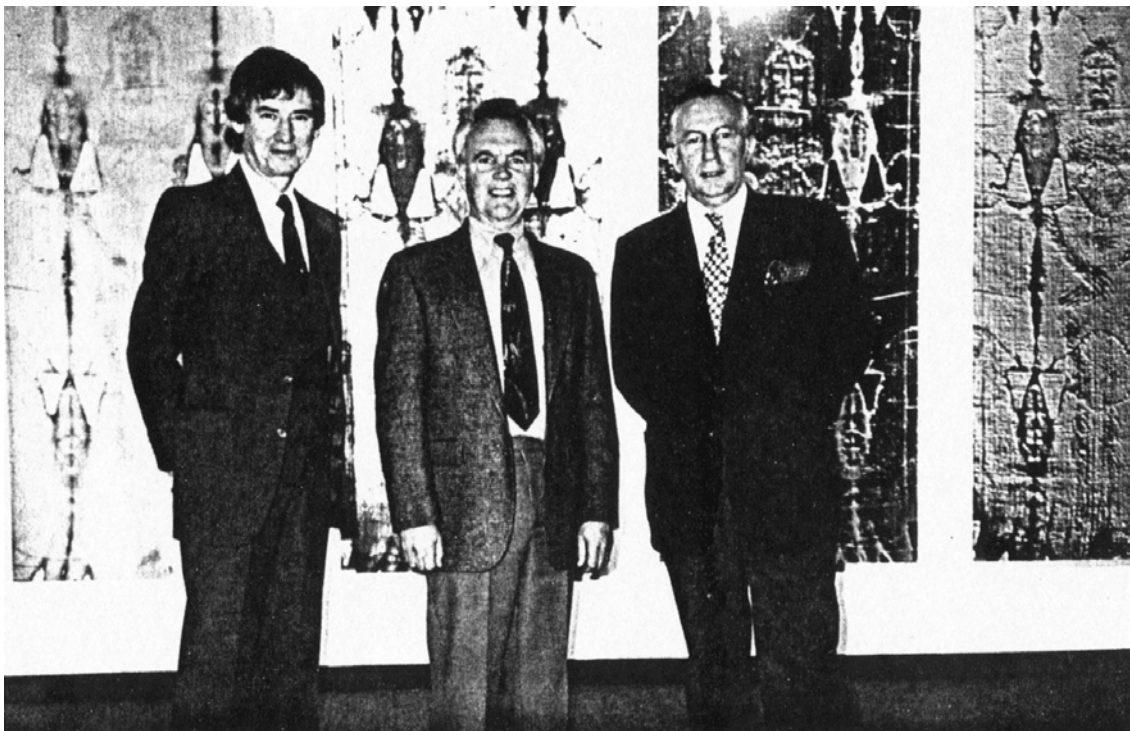
Prof Vernon Miller of Brooks Institute speaks at the Melbourne exhibition



SHROUD PHOTOGRAPHER IN MELBOURNE (cont'd)

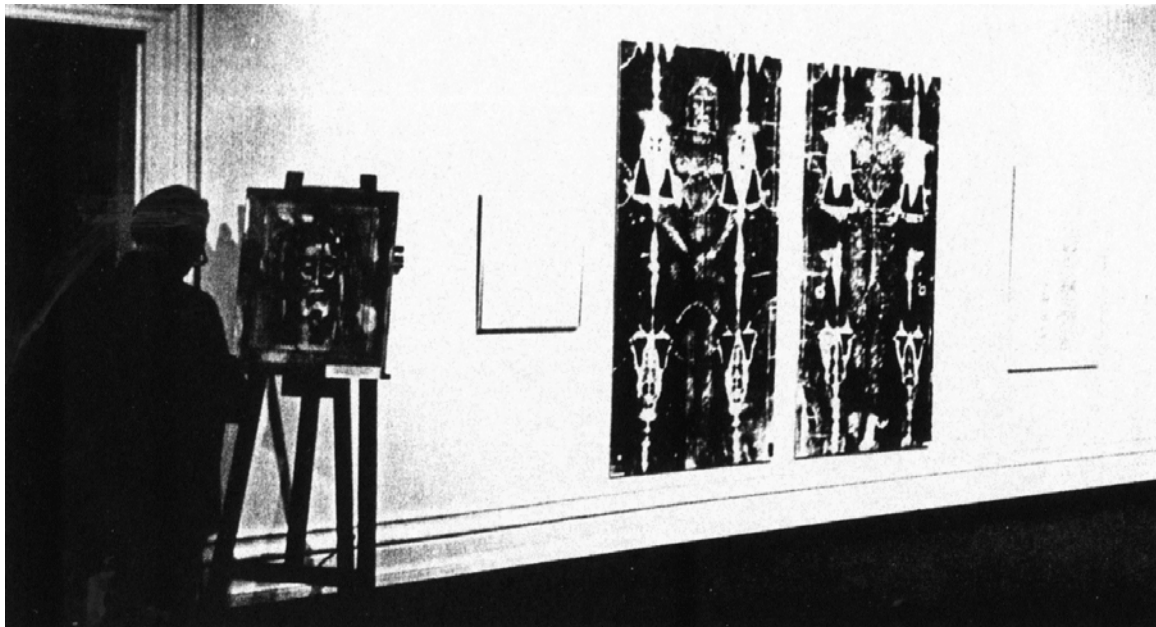


Vernon Miller's actual size picture of the Holy Shroud



Professor Gale Spring, Vernon Miller and Rex Morgan

SHROUD PHOTOGRAPHER IN MELBOURNE (cont'd)



Miller contemplates a painting of the Shroud face by a student of RMIT



Paul Smith and Keith Claughton

WHY THE SHROUD OF TURIN MAY BE GENUINE AFTER ALL

by

**W.S. McBirnie, Ph.D. &
Lona Ann White, Research Director**

Science cannot conclusively prove the authenticity of the Shroud of Turin as Jesus Christ's burial cloth (because it could have been used for someone else), but science has purported to prove the Shroud is a fake.

Despite years of testing by a team of 40 eminent scientists, whose conclusions point strongly to the genuineness of the Shroud, a single round of Carbon-14 dating tests, which placed the Shroud in the Middle Ages, have been touted as the "Final Word" on the subject. In late 1988 all the major media gleefully blasted the news to a waiting world: "The Shroud of Turin is not the burial cloth of Jesus." Period. End of argument.

Wrong! That's not the end of the argument. The findings of the original team of scientists involved in the Shroud of Turin Research Project (STURP) cannot be so easily dismissed. Furthermore, as we shall see, Carbon-14 dating, especially as it was conducted on the Shroud, is completely unreliable as the "Final Word."

In Favor of the Shroud

The Shroud is a linen burial cloth 14 feet, 3 inches long and 3 feet, 7 inches wide, and bears the image of a 5'11", 165-pound crucified man with wounds exactly fitting the Gospel accounts of Jesus Christ's murder. No record exists of other crucifixion victims having been scourged, speared and crowned with thorns as so vividly described in the Gospels and clearly visible on the Shroud.

STURP, the research group, was comprised of philologists, pathologists, physicists, criminologists, textile experts, chemists, surgeons, internists, radiologists, experts in pollens, lasers, neutron activation, phototelemetry and image enhancement, plus biblical scholars, art historians and archeologists.

Their tests were conducted with the most sophisticated available equipment and included such exotic-sounding studies as x-ray and x-ray fluorescence analysis, infrared thermal testing, spectroscopy, computer-enhanced photographic analysis, mosaic photography and ultraviolet light examination.

The two most haunting questions were: How did the image get there and how old is the cloth? One by one, the tests eliminated various theories which attempted to explain the

image, such as that it had been painted on. One of the most startling discoveries, made through computer analysis of the image, revealed it to be three-dimensional in nature, an effect produced by intensity variations in the image in proportion to the distance of the linen from the body it covered. Also, an early photographer of the Shroud found that the negatives of his photographs showed a positive image, meaning the image on the cloth itself was a negative. How could a medieval forger have accomplished such a feat before photography was even invented?

The scientists tried scorching the cloth, but regardless of how it was done, it didn't work. They tried singeing a statue (or bas-relief) to produce a 3-dimensional image, but when image-analyzed by computer into 3-dimensional form, it was totally distorted.

The only conclusion was that the image could have been formed by a burst of radiant energy, lasting only a millisecond. Some scientists shook their heads: A burst of radiant energy ... from a corpse? Many openly admitted the possibility that a resurrection could have been the energy source that imprinted the image.

Examinations of blood areas proved they were real blood (not paint). Studies of various pollens on the cloth showed they corresponded to those prevalent in geographical locations where the cloth was known to have been kept at particular historical periods. Computer-enhanced details of coins, placed over the eyes, revealed a particular spelling error — an astounding discovery — because the misspelled coins were issued between A.D. 29 and A.D. 32 (about the time of Christ's death).

In addition, textile analysis showed that the Shroud contains cotton, which was not grown or widely used in Europe in the Middle Ages, but had been used for centuries in the Middle East.

In short, these tests, among many others, though unable to conclusively prove the Shroud's authenticity, pointed strongly toward it.

The Carbon-14 Fiasco

Then came the long-awaited Carbon-14 tests in 1988. A radioactive radiocarbon, Carbon-14 has a half-life of about 5,730 years, that is, half the original amount is lost in that amount of time. Since only living organisms absorb C-14, and, after death, it decays at a constant rate, the dating theory measures the residual C-14. The new accelerator method", which uses an accelerator to do mass spectrometry (studies of energy wavelengths) to determine age, was chosen because it only requires a piece about the size of the nail of your little finger and is supposedly accurate within +/- 200 years.

WHY THE SHROUD MAY BE GENUINE(cont'd)

The Carbon-14 testing procedures were supposed to align with several stipulations:

1. The laboratories selected must agree as to the testing methodology, so that the comparisons would be equal. Later proposals suggested that alternate methods would increase objectivity, but unfortunately, this idea was ultimately jettisoned.
2. They must do a double blind study. Such studies ensure objectivity by giving the labs two unidentified samples to date. One would be from the Shroud, the other a cloth of a known date.
3. To test the labs' accuracy, the labs were required to first successfully date a sample of known origin. (One of the labs was off by over a thousand years! And these tests were supposed to absolutely date the Shroud?!)

STURP scientists and authors Kenneth Stevenson and Gary R. Habermas in *The Shroud and the Controversy* cite several failings in the manner the tests were conducted:

1. Originally, seven labs were to conduct the double-blind tests. However, in the end, only three labs received samples: the University of Arizona, the Federal Polytechnic Institute in Switzerland and Oxford University in England. Thus, the alleged "Final Word" on the Shroud came from a ridiculously small number of "experts."
2. STURP discovered, to their horror, that the labs were able to identify the Shroud sample, so results of the so-called "blind test" relied, in actuality, on the good faith of the laboratories. The labs openly admitted they knew when they were dating the Shroud, because the date of the "dummy" cloth had been published and made available to all the labs; plus it had a totally different weave from the Shroud, a situation which facilitated identification of the Shroud. Stipulation number 2 was out the window.
3. Oxford University, which has very little experience in dating cloth, was the first to leak its conclusions to the world [sic. The leak was from Arizona laboratory] — that the Shroud is a medieval forgery. It is scientifically unsound to quickly pronounce the Shroud a fraud on a single test in a field in which the lab has limited experience.
4. The two labs that developed the accelerated method, and are, therefore, probably the most familiar with it, were not selected to conduct the test.
5. The dating procedure was erroneous because of faulty decontamination by six labs doing some pretesting.
6. The samples were all taken from a strip of cloth two to three centimeters from a repair site from a fire it suffered in 1532 in France. Conceivably, the strip could have been added at that time, and thereby would be disqualified as a part of the original cloth. Also, we know for a fact that the Shroud was heavily handled throughout its history, having

been on display at various times. Each of these factors adds an unknown variable of contamination which would skew the accuracy of dating.

7. No testing was done to check whether the fire altered the cloth through "isotope exchange," which occurs at 300 degrees C, although the Shroud was exposed to at least 960 degrees C. Furthermore, it was subjected to super-steam vapor when doused with water, which would have caused additional molecular exchange. Since the labs ignored these factors, they left themselves open for a faulty date.
8. Labs used only one type and amount of solvent to cleanse all three samples, though stronger solutions could have removed additional contaminants, resulting in an older, and probably, more accurate, date.
9. A highly reliable method for testing cloth samples ("small counter method" using gas) was not used.
10. The textile expert present when the test samples were removed has never issued detailed public statements or published a report about the location, examination or extrication of the samples.

This is a significant oversight — some threads were reportedly snipped off, rather than unwoven to help prevent contamination. In fact, the test samples may have been taken from the side strip — a highly contaminated portion of the Shroud.

11. The tests' results were boldly proclaimed to the public before any peer reviews of the method were published.
12. The labs, which gladly announced they had "proof of forgery," were obviously prejudiced against the Shroud. As we have seen, their "proofs" were themselves fraught with discrepancies. Their alleged scientific objectivity was non-existent, a stance which is completely unacceptable, considering that other published, peer-reviewed pro-Shroud data had not been successfully refuted. In fact, most of this latter data had been largely confirmed by other scientists.
13. Possibly the most damaging piece of evidence to torpedo the 1988 C-14 fiasco comes from a disclosure that the Shroud was secretly dated at the University of California nuclear accelerator facility in 1982 — where separate ends of a single thread were used. The results were revealing, to say the least. *One end of the thread was dated A.D. 200 and the other end A.D. 1000.*

In view of this disparity, how could any reputable scientist claim that the 1988 testing "proved" anything (except, perhaps, the unreliability of the method)? Also, the plus or minus 200 years accuracy factor for C-14 would place the earlier dated portion of thread at about Jesus' time. This finding should have raised some healthy speculation about the possible genuineness of the Shroud.

14. Willy Wolfli, in *Nuclear Instruments and Methods in Physics Research* blatantly admitted, "The C-14 method is not immune to grossly inaccurate dating when non-apparent problems exist in

WHY THE SHROUD MAY BE GENUINE (cont'd)

samples from the field. The existence of significant indeterminate errors occurs frequently." It seems the scientists testing the Shroud conveniently ignored the plain facts about C-14's shortcomings.

Other Evidence of Carbon-14 Deficiencies

A dry run of new accelerator C-14 testing occurred in 1986 to date an Egyptian Bull Mummy linen (wrappings from an ancient Egyptian burial) and two Peruvian linen cloths. On the first, the dates ranged from 3440 to 4517 B.P. (before present) — a span of 1100 years. However, the known age of the cloth was 3,000 B.C. The closest date they could get using C-14 was 2548 B.C., which required a calibration of 472 years for correction.

The date on one of the Peruvian cloths had a 450-year span, with the closest date 250 years off. The other Peruvian cloth had a span of over 1100 years, the closest date less than 100 years off. As for the *farthest* dates, they were way off the mark — by 1549 years, 709 years and 439 years.

The testers concluded that contamination during pretreatment caused the miscalculations. So they reran the tests with significant improvement, but the oldest cloth still erred by nearly 1,000 years — on the young side (as with the Shroud).

Incidentally, 64 pieces of the Egyptian cloth were used, so how could three fingernail-sized samples of the Shroud prove scientifically conclusive?

The *McGraw-Hill Encyclopedia of Science and Technology* points out critical forms of "variation" that are problematic to all C-14 dating and which necessitate a calibration of the dates. To explain: The first is secular variation, a long-term variation in which the radiocarbon years and the calendar years are not equal. The second, the DeVries effect, causes dating anomalies by which an item can "reflect two or more points in time" for a single artifact being dated. Furthermore, neither the scientists nor current data are consistent on artifacts dating prior to A.D. 1000. In fact, most register too young, which may have happened with the Shroud. Variations of up to several hundred years can occur.

McGraw-Hill concludes, "C-14 has lost a considerable amount of its significance."

William Meacham, (not from the C-14 testing labs used for the Shroud) in a paper delivered at a 1986 Hong Kong Symposium on the Shroud, said, "I doubt anyone with significant experience in dating ... would dismiss ... the potential danger of contamination and other sources of error. No responsible field archaeologist would trust a single date, or a series of dates on a single feature, to settle a major historical issue ... No responsible radiocarbon scientist would claim that it was proven that all contaminants had been removed and that the dating range was ... its actual calendar date."

Conclusion

Any way you look at it, the Carbon-14 dating results should not be considered reliable. Fortunately, both the Vatican and the Shroud's Turin keepers have been petitioned to allow further testing to acquire a more scientific "second opinion".

If such a fresh study occurs, one hopes the scientists will unprejudicially do what the earlier testers failed to do — take into consideration the variant factors affecting accurate testing, due to the Shroud's long history. As William Meacham put it in an interview in mid-1988:

"For the Shroud, there is a 600-year history in a number of different environments and unknown handling situations, and a possible further 1300-year existence during which the object could have been in contact with virtually any natural or man-made substance in the areas it was held. To measure Shroud samples, one must therefore consider every possible type of contamination and attempt to identify and counter them all."

Clearly, the jury is still out on the Shroud's authenticity.

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THE WORLD'S GREATEST BLUNDERS

From time to time one comes across an article on the Shroud or an entry in a book for the idiot market which has been written by someone with no background whatever in the subject and this can be annoying to those who know even a few facts about it. *Shroud News* correspondent Paul Smith of Melbourne has sent us a copy of a chapter in a book entitled *The World's Greatest Blunders* (Octopus Books, London) by one Sue Blackhall which is so abundant in errors it is laughable. It seems worth reproducing just to show what some people get away with. There are errors of fact in almost every sentence of the thing. Some of the most appalling examples are, "The shroud's main surface is almost black," (someone has given her a bad print of the negative image one supposes). Or, "In June 1970, the shroud had its fifth airing - at a secret gathering of Italians whose names were never revealed." In that sentence alone there are five errors of fact. The publication of the article is itself one of the world's greatest blunders. So for some pulp journalism, read on:

Believers fell to their knees to give prayers of thanks when the news was announced. The Holy Shroud of Turin, the sacred cloth of Christ revered by millions, was to be displayed in public for the first time in 45 years. The 14-foot length of linen was to be viewed on the high altar of Turin Cathedral in 1978, in a case with specially controlled atmosphere, to protect the precious religious relic from the slightest risk of damage.

In one month alone, more than two million pilgrims visited the cathedral to stand awestruck before this material evidence of the Crucifixion, miraculously preserved. The cloth showed the shadowy outlines of Christ's face, his eyes closed, and his forehead gashed by the crown of thorns. His arms were crossed and a mark on his right wrist showed where he had been nailed to the cross.

Ten years later scientists announced that the holy shroud, which had strengthened the faith of millions over the centuries, was the work of a 14th-century forger. Their pronouncement, backed by indisputable proof obtained by using the latest technology, ended long years of controversy and debate. Cardinal Anastasio Ballestrero, the Archbishop of Turin, broke the news in October 1988. Technology had proved that millions of believers had been mistaken.

Scientists in Oxford, Zurich and Arizona had used carbon dating to check the age of historically authenticated samples of cloth and cuttings from the shroud and were '95 per cent' certain of their findings: the blessed item of

Christendom was in fact a piece of linen woven between AD1260 and AD1390. It could never have covered the body of Christ. When the news was announced, Dr Michael Tite, keeper of the British Museum research laboratories, and Professor Edward Hall and Professor Robert Hedges of Oxford, all confirmed there could be no doubt about their scientific findings.

WORLD'S GREATEST BLUNDERS (cont'd)

The news, though deeply disappointing to the faithful, did not come as a great shock to sceptics. As long ago as 1389, the Bishop of Troyes had described the shroud as a cunning forgery. He said his predecessor had met the forger!

The Holy Shroud which provoked so much Christian controversy over the centuries has a fascinating history. The first reference to its existence was found in St Mark's Gospel. The disciple stated that Christ's cloth was found in his empty tomb after the resurrection. Later, pilgrims to Jerusalem mention 'the shrouds of Christ'. It was later rumoured to be in Turkey, then in France and finally in the possession of the Savoy family in Italy during the 14th century. About this time, the first doubts about the authenticity of the mysterious and revered item were being expressed.

The Bishop of Troyes complained to the Pope of the time: 'Canons have falsely and deceitfully, being consumed with the passion of avarice and not for any motive of devotion but only of gain, procured for their church, a certain cloth cunningly painted, upon which by clever sleight of hand was depicted, the twofold image of one man, that is to say the back and front, they falsely declaring that this was the actual shroud in which our saviour Jesus Christ was enfolded in the tomb.'

In the late 15th century, the shroud was given for safekeeping to Louis I who built a chapel at Chambéry to house it. It was rescued from destruction in 1532 when fire gutted the castle, and was plunged into water. The signs of the burn marks are still visible. Early records show the shroud was once boiled in oil — but no one knows why.

The treasure was moved to Turin in 1578. Before its much publicized showing in 1978, the shroud had been taken from its hallowed casket on only five occasions. It was displayed for the marriages of Vittorio Emmanuele III in 1896 and of Umberto of Savoy in 1930. The third occasion was in 1933, a Holy year, marking the 1,900th anniversary of the death of Christ. When Italy entered the war, the shroud was hidden for safety in the sanctuary of Montevergine near Avellino in southern Italy. In 1946, the Archbishop of Turin cathedral, Cardinal Fossati, went to Montevergine to return the shroud to its rightful home.

In June 1970, the shroud had its fifth airing — at a secret gathering of Italians whose names were never revealed. They included an archaeologist, a chemist, a biologist, and church dignitaries. Dozens of photographs were taken and powerful microscopes were used to examine the cloth. The investigation was to herald many years of raging controversy and more scientific analysis.

WORLD'S GREATEST BLUNDERS (cont'd)

The shroud's main surface is almost black, with the visible outline resembling a photographic negative, of a human face and body of a man 5ft 10½ inches tall. There appear to be bloodstains from the hands, feet, and a wound in the side. The torso bears the imprints of flagellation wounds and the eyes show the imprint of coins placed over them, a death ritual at the time of Christ. Early examination of the imprints revealed the coins had been minted shortly before Christ was crucified. This finding convinced experts in the early 1970s that the shroud could not be an ingenious hoax.

An amateur photographer, Secondo Pia, was allowed to take the now famous picture of the mysterious wrap in 1898. The photographic process created a clearer and more dramatic face, and Pia was greatly moved by what he saw. His photograph added more weight to the theory that this was indeed the linen cloth in which Christ's broken body had been wrapped for the three days before the Resurrection.

In 1931, the shroud was photographed again by a professional, Giuseppe Enrie. The result convinced many more people that the shroud was indeed a holy relic.

And in 1981, American scientists using modern technology felt confident the shroud was authentic. Examination by experts in Santa Barbara, California, showed blood on the shroud to be human, but the Vatican would not allow them to use a special radiocarbon test which would have settled the issue conclusively.

In 1988, the Vatican finally gave permission for the carbon-14 tests to be done to date as accurately as possible the cloth, a blend of cotton and linen woven in a herringbone pattern. It was an earth-shattering decision.

The tests showed conclusively that the Shroud of Turin was not the burial cloth in which the body of Christ had been wrapped. It was the cunning fake of a 14th-century artist.

Even then, the results were contested by many who refused to believe they had been paying homage to a fake. Surely the same burst of energy which had resurrected Christ could have altered the composition of the cloth? Others felt the results confirmed their long-held doubts.

The confusion has been cleared up but the mystery remains unsolved: who perpetrated such a hoax? Was it the French knight Geoffroy de Charny who 'discovered' the shroud in about 1350 and put it on display in the church he had just built? This would have attracted vast numbers of pilgrims — all willing to leave gifts in the collection plate. Even the great Leonardo da Vinci came under suspicion at one time, His genius was such that he could have easily fabricated a magical material — and myth.

The church has nothing to fear from the truth,' declared the shroud's keeper, Cardinal Ballestrero, before the results were announced. He stressed that the faith of the church did not depend on the shroud or any other religious relics.

WORLD'S GREATEST BLUNDERS (cont'd)

Pilgrims and sightseers still flock to the Turin Cathedral in great numbers. 'I have been coming here for 30 years and nothing will persuade me .that the holy shroud is not genuine,' said one.

Professor Robert Hedges, a scientist involved in the conclusive dating tests, commented: 'It is shame that science gets involved in the testing of holy relics. It is like the loss of innocence in the Garden of Eden, but once the question comes up, science has a responsibility to provide the answers.'

But belief is a powerful thing, and although a master forgery has been unmasked, it will make little difference to those who kneel before the Holy Shroud of Turin.



SYMPOSIUM SCIENTIFIQUE INTERNATIONAL DE ROME
SUR LE LINCEUL DE TURIN

The Centre International D'Etudes sur le Linceul de Turin, (CIELT) which organised the 1989 Paris Symposium is organising a second major international Shroud Symposium in Rome from 10 to 12 June 1993 inclusive. The conference will address principally scientific matters, particularly in reference to the preservation of the Shroud but there will also be a section devoted to historical aspects.

Enquiries should be addressed to:
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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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