

THE SHROUD OF TURIN (too' rin)

This writer's early interest in the shroud was rekindled in the mid 1950's with the availability of a book entitled "A Surgeon at Calvary" (*). The author's name is not readily available; however, this was the first published scientific book with such a unique approach, examining the Shroud of Turin from an anatomical viewpoint. The surgeon went to great lengths to relate the anatomical position of the arms and legs to the structure of the cross and the location of the nails in the feet as well as the hands.

He experimented with a human cadaver by placing the nails, one in each of the palms of the outstretched cadavers hands and fastening them so as to suspend the weight of the cadaver from an overhead cross beam. The only support or adhesives holding the weight of the cadaver were tissue, muscle and tendons. The cadaver soon fell from the beam, as the suspended weight was too great for the tissue to hold, tearing through as it dropped to the floor.

Next, he suspended the cadaver by placing the nails at the distal end of the radius and ulnar bones at the junction of the carpals. We ordinarily refer to this as the wrist. Please note that this is where the radial and ulnar arteries, nerves and veins are located and in order to fix the cadaver to the beam, the nail had to be driven in this precise location. Suffice it to say, the cadaver was successfully suspended in this manner. The large bloodstains on the shroud appear here and not in the palm. Noteworthy too is the flow of blood which courses upward on the forearm and over the ulna.

Being nailed to a cross is not just a form of execution; it is also a means of inflicting cruel punishment on a condemned criminal. Consider, if you would, a nail driven through the area just described which would not only sever the vessels but the radial and ulnar nerves as well, exposing them to the abrasive action of the wrought metal each and every time the victim attempted to pull up to sustain life. Not only is there excruciating pain and suffering but the basic human instinct for survival is stretched to the limit. With all of the condemned victims weight suspended from his arms, it is impossible to breathe unless one pulls himself up so that the chest cavity will expand allowing the lungs to fill with air. In a slouched or hanging position, the victim soon suffocates unless the air is replaced.

The German Nazi Gestapo used this method of torture by suspending their victims from a rope hanging down from the ceiling. The victims' toes were allowed to touch the floor ever so slightly so as not to hold all of their weight but just enough so that the victim would have to pull up in order to breathe.

Mankind has always been capable of designing cruel ways for torturing and killing their condemned. Reports in the 1930's tell of how the Japanese would take their captured Chinese enemies and tie their hands behind them. Next, they would place a stick of dynamite in the victim's mouth, tape his mouth shut and light the fuse. Should the victim reach the nearby river they could jump in the water and extinguish the wick. The condemned had no way of knowing that a lighted fuse is not extinguished under water.

Another method was to tie the victim's hands and then order them to run at the count of three and they would be released if they could traverse a certain distance in a given period of time. Right after the count of two and before the count of three, the blindfolded victims head would be severed from his body with a sharp sword and a hot metal plate from the campers warming fire would be pressed on the stub of his trunk to sear and seal off the blood flow. The victim had already programmed his body to run in anticipation of the count of three. Wages were placed for each event....the victims never won.

Even the guillotine, used on thousands of French men and women for a period of over ten years during the French Revolution and touted as being a painless and quick death, had its drawbacks. Many argued rather successfully that the victims lost consciousness as soon as the neck was severed and the condemned suffered ever so slightly.

The great French chemist and mathematician, Antoine Lavoisier, (*Lah vwah ZYAY*) (1743-1794), fell victim to the blade. In spite of his achievements, especially his research and experimentation that proved matter could not be created nor destroyed, he was put to death. He performed his last experiment at the instant of his death. A prior arrangement had been made with a colleague of his in that he, Lavoisier, would blink after he was beheaded should he be able to sense anything at all. It is reported that he blinked with both eyes some twelve to fifteen times after his head was severed from his body.

Truly though, crucifixion was the cruelest of all executions since the victim often times would struggle several days on the cross trying to survive against all odds.

Our noted surgeon develops an additional observation. The Shroud shows only one foot with a dried blood mass resulting from the nail penetration and severing of the arteries and veins. Why would only one foot be nailed and the other foot allowed to flail about? Is it possible that the victim would be given some means of easing the struggle by wrapping his leg about the upright beam? Not likely. It was not the executioner's intent to make the victim comfortable. The feet were nailed so as to not give any support. This was accomplished by crossing one foot over the other, turning the ankle so that the Achilles was directly over the dorsal surface of the other foot, then driving a nail directly through to the upright wooden beam.

Recall the gospel account of the death of Jesus. He called out "I thirst" and they gave him a sponge soaked in wine and vinegar. After drinking Jesus said "It is finished" and with a loud voice he gave up the ghost. Thus Jesus made a conscious decision to die at that instant even though he had great strength in his body as evidenced by his loud cry. Later, as we have read, when they went to take down the bodies, the centurion broke the bones of the two thieves, (as one with broken bones in the arms and legs could not continue to struggle for air), but they saw that Jesus was already dead. Then one of the soldiers with a lance pierced his side and immediately there came out blood and water.

The part of the heart, which extends to the right of the breastbone, is the right auricle. In a corpse, the right auricle is always filled with blood as venous blood flows from the superior and inferior vena cava. Jesus was already dead as we note from scripture. The soldier, with a lance, pierced the right side, driving his lance diagonally upwards and across the chest cavity piercing the heart. No doubt a skilled and practiced art. Had he pierced the left side, he would have pierced the ventricles, which, in a corpse, have no blood in them. Repeated experiments during the period from 1932 through 1937 by various pathologists in France and Italy would document the flow of blood from the right auricle. This flow would pass through the pulmonary tunnel created by the 'lance' at the fifth intercostal space. (*Blood remains in a fluid state post mortem as long as the vessel has not been severed*).

John attests to having seen blood and water flowing from the side of Jesus. What then would be the source of water? Two independent researchers confirm that the 'watery' fluid was the serous 'clear' fluid from the pericardium, the sac enclosing the heart. When the right auricle was pierced, the blood from the superior vena cava, which would come from the head and arms and under pressure, would flow rapidly, or as John states 'immediately.' At the same time, the pericardium, having been pierced as well, would give up its fluid, which appeared to John as water. Viewed from the top, here is a sizable bloodstain on the left side of the shroud in the proximity of the right lower ribs.

Having looked somewhat at the mechanics of a crucifixion, we need next to examine the history of the shroud and how the surgeon-writer links the images on the cloth to his anatomical experimentation.

The shroud dates back to the pre-medieval period, perhaps as early as the year 500. My antiquated World Book encyclopedia, circa 1964, describes "...the Shroud of Turin as a cloth 14 feet long by 3 and 1/2 feet wide, kept at Turin, Italy. Its history is unknown beyond 1171 at Constantinople. Traditions claim that it wrapped Jesus' body in the tomb after His crucifixion. Photographic reversal of the lights and shadows of the stains on the shroud, (which are largely negative), reveals a life-size front and back figure of a man who was crucified, scourged, lanced, and bloodily crowned."

The first accepted documentation happens to be a letter declaring the shroud as a fraud. It was described as "a twofold image of one man, that is to say, the back and the front...thus impressed together with wounds which he bore." This linen cloth had occupied a place of honor in the French town of Lerey since the 1350s. The local Bishop of Troyes in 1389 wrote to the pope complaining that "...although it is not publicly stated to be the true shroud of Christ." he noted, "a predecessor of his had ascertained that the image is cunningly painted...a work of human skill and not miraculously wrought or bestowed." (By contrast, when asked recently of his belief in the authenticity of the shroud as being the burial garment of Christ, Pope John Paul II simply replied "I believe that it is.").

Sixteenth century nuns described in detail a 14-foot long herringbone-twill linen cloth, of which the bishop spoke, bearing the image of a naked and bearded man about 6 feet tall, hair in a loose ponytail, back apparently scourged with a multi-thonged whip, hands crossed modestly before him." (We will look at these hands from a messianic Jew standpoint later in this presentation).

The shroud fell into the possession of Italy's oldest reigning family, the Savoys who dated back to Humbert, the Count of Savoy in the 1000's. The Savoys moved the shroud to Turin where large public crowds of pilgrims viewed it with great respect and curiosity. Although somewhat faded, the cloth has both the color and character of faint scorch marks on a well-used ironing cover.

It was not until the year of 1898 on May 28 that a city counselor named Secondo Pia (py'-ah) took the first photographs of the relic. Pia nearly dropped the photographic plate as it was slowly developing in his dark room and the photo of the faint cloth markings began to jump out with such extraordinary clarity and added detail that "he felt certain he was looking on the face of Jesus." In subsequent exposures, his body, the lance wound in the chest and the bloody rivulets where a crown of thorns might have been, were suddenly and vividly manifest.

A later writer, Ian Wilson, would write in his book entitled *The Blood and the Shroud*: "The clear implication was that the shroud itself was in effect a photographic negative that had been waiting dormant, like a preprogrammed time capsule, for the moment that photography's invention would release its hidden true 'positive'."

More evidence seems to mount as we review the work of Dr. John P. Jackson, a physicist working in the weapons lab at Kirtland Air Force base in Albuquerque, New Mexico. He used a special filter to make a color analysis of a Shroud photograph. He also ran the photo through a VP-8 image analyzer. This machine could take various intensities of certain images and display them as three dimensional, thus obtaining relief representations for commercial and military purposes. Dr. Jackson was speechless as the image flashed on the machine's monitor---there were no distortions, no errors, in the perfect three-dimensional image. He was looking into the face of God.

Jackson's wife, Rebecca, is an expert in the field of ethnology, a branch of anthropology that analyzes culture, particularly in regard to their historical development and the similarities and dissimilarities between them. It is she, a convert from Judaism to Catholicism resulting from her and Dr. Jackson's findings surrounding the Shroud that has enlightened us as to the Orthodox Jewish burial customs and rituals. Having been granted permission to study the Shroud first-hand, Dr. Jackson headed, in 1978, a multi-disciplinary team of thirty-five American scientists, along with Italian and Swiss researchers. His findings are noted below, as follows:

"Our data supports the gospel reports of Christ's passion. We found every wound, from Christ's crowning with thorns and his scourging to his carrying the cross, the piercing of his side, and his being nailed to the cross. After all our research not one member of the team thought the Shroud was a forgery. Our samples also showed that the blood on the Shroud was real. We know it is not a painting because there is no inter-fibril cementation---no glue between the fibers. Even more interesting is that no chemicals were associated with the fibers. From what we could infer that some non-chemical process or energy source imprinted the image of Christ on the cloth and also changed the color of the linen. Could it have been radiation that emanated from the radiant, risen body of Christ? Could the Shroud have served as the medium on which a 'negative' of Jesus' body was made during the Resurrection?"

Upon close examination of the shroud we note a very thin penetration of the flax woven fiber to the depth of only one fiber. No medieval artist, no matter how cunning and deceptive, could have detailed that consistently over a span of 28 linear feet. Nor was it until the 20th century technology that ultraviolet light would detect the yellow green fluorescence of the fluid exuded from the many blood clots, such exudate being invisible to the naked eye. One researcher, Alan Adler, a chemist, believes that some sort of radiation process triggered the image. Although reluctant to state that the shroud is authentically the burial cloth covering Christ, most are reluctant to make a disclaimer that it is not the burial cloth.

A scientific investigation was undertaken in 1988 to validate the date of the linen cloth. No less than three independent laboratories in Zurich, Oxford and Tucson would come to a similar conclusion. The shroud cannot be dated any earlier than 1260-1390. This was conclusive proof that the shroud was medieval. Using the latest scientific technology, these scientists equally divided a one-inch square taken from the shroud and subjected it to carbon 14 analysis. (Pure carbon is, for example, a diamond). Carbon 14 is an analogue of carbon. This test measures the residual carbon 14 in an object, such as the flax plant fibers used in making the linen. This carbon 14 would begin decaying from the time the flax plant was picked. Since the half-life for carbon 14 is 5700 years, a trained scientist could accurately determine how long the flax plant had been dead by measuring the amount of carbon 14 in the linen. These tests show the shroud to be only 700 years old.

Much debate follows. Statistically, 7056 square inches of material represented by only one square inch hardly qualifies for any acceptable random sample, especially when this is divided into three, one third of which is given to each of the three research groups. Each sample is less than .005% of the entire cloth and taken from only one location. The three test samples, although tested by three separate laboratories, cannot represent the entire population of all of the fibers. Then there is the question of sample quality. The one-inch square was taken from an area that was water stained, scorched and back-woven, indicating repair to the shroud. These repaired threads differ from the original shroud threads.

Other factors need to be examined. Over a period of time, bacteria produce a lacquer-like coating. When this coating was removed from an earlier artifact tainted with blood, the test showed a 600

year difference and placed the artifact to about 400 A. D. Armed with this information, researchers examined the shroud and were able to detect a similar bio-plastic film. Further tests on a few randomly selected filaments, revealed coccal-shaped bacteria and filamentous mold-like organisms, increasing the diameter of the fibers by as much as 60% in some area.

Would the 1532 fire have had the same effect on the Shroud's carbon-14 test? This could account for the discrepancy in results. Studies are underway on similar isotopes at various heating processes to support this theory. The cloth must be seen not only in terms of the carbon-14 measurement but also in light of archeological and historical data. For example, Swiss criminologist Max Frei's work shows pollens on the Shroud that trace its journey from Palestine through the Mideast to its present location. If a Shroud forgery had originated in Europe, how did the Palestinian pollen get on it?"

Enter now, the other shroud...the napkin placed on Christ's head. According to the Gospel of John, Jesus left not just his shroud behind in the tomb but also a "napkin, which had been on his head, not lying with the linen cloths but rolled up in a place itself." Measuring 2 ft x 3 ft, this cloth or napkin is housed in a silvered cedar chest in the Cathedral of Oviedo, in Spain. Records say that it was spirited out of Jerusalem around 614 when the city was attacked by Persia. It has been housed in Spain since 1113. Although there is no image on the cloth, there are similar bloodstains corresponding to those on the Shroud of Turin.

What significance, if any, can we place on this head covering? The turban, as defined in Exodus 28:39, was part of the priestly garment: "Weave the tunic of fine linen and make the turban of fine linen" was the command of God, "...to give them dignity and honor." "Concentrate them so that they may serve me as priests," God speaking of Aaron and his brothers. And in 29:6 "Put the turban on his head." In Zechariah 3:1, we read of: Joshua the high priest standing before the angel of the Lord, and Satan standing at his right side to accuse him. The angel instructs those standing by to take off the filthy clothes from Joshua as his sins had been taken away and rich garments would be placed on him. And they put on his head a clean turban, verse 5, thus reinstating him into his high-priestly function so that Israel once again has a divinely authorized priestly mediator. Joshua translated in the Greek is Jesus. We see in the crucified Jesus both victim and high priest offering himself as the perfect sacrifice.

Our Surgeon at Calvary author relates that other researchers believe that the markings on the shroud were brought about by the chemical reaction of the burial herb aloes and the ammonia left on the skin resulting from the profuse sweating before and during the crucifixion. We should be reminded however that this Christ whom they crucified was a condemned criminal and as such, had no right to a ceremonial cleansing of his body in preparation for burial. Jesus was buried hurriedly because of the approaching Sabbath. Such a chemical phenomena would take several days to react, if at all.

Jesus was considered a *Poresh Mayhatzeeboor*—an outcast of the Jewish community—, which meant that he could not, under Jewish law, receive the customary (and time consuming) ritual washing before burial. Also prohibited from ritual washings were: (1) persons who died a violent death or, (2) whose blood was flowing at the time of death, (3) someone killed by capital punishment relating to a crime of a religious nature, or (4) Jews who were killed by non-Jews. Jesus met all four requirements. Jewish law also insists that the fingers of the deceased be stretched out in burial, because fingers that are rounded and shaped as fists epitomize pagan demonic defiance. The hands and fingers of the man in the Shroud are outstretched.

In addition, the Shroud's rectangular shape is consistent with the Jewish symbolic motif of *Arba Canfot*, or "four corners." According to Jewish tradition, the circle represents wholeness and perfection, while the square symbolizes man's restrictions. Jesus' forelocks and beard conform to *Halachah*, the Jewish law that forbids cutting the four corners of a man's head.

Another indication of the Shroud's authenticity is its size, which is clearly expressed in Jewish cubits. Used in ancient Israel, this measurement is employed even today in the Orthodox Jewish world in the matters of ritual construction and law. The Shroud's size is unevenly expressed in feet and inches, but in Jewish terms, it is exactly eight cubits long by two cubits wide.

In Judaism, the *Akaydah*, the concept of binding, is a sign of the absolute test of faith. Under Jewish law, burial garments are to be bound in a certain way. Even today, only plain knots are permitted in the cloth strips securing a body inside a shroud, and they are not acceptable in the burial vestments themselves. Jews banned the doing and undoing of knots, which pagans practiced as a form of witchcraft, releasing intricate knots they had formed as if by magic. The Shroud vestment contains no knots and also no seams, just like the vestments of the High Priest of the Temple of Israel.

Would it have been possible for a fourteenth-century gentile forger to acquire details of such knowledge—particularly before the invention of the printing press—to create a fake burial cloth? That would be highly unlikely, because before the Age of Enlightenment, theological communications between Jewish and Christian scholars were rare. It is doubtful that a Jewish scholar would have been willing to furnish his expertise to a gentile for such a matter.

It was only through the goodness of one named Joseph of Arimethea that Christ was “wrapped in a clean linen cloth and placed in (Joseph's own) tomb.” (Matthew 27:59-60. This linen cloth resembles the uniquely designed linen weave of the high priest's ‘checkered tunic’ mentioned in the Book of Exodus 28:39. The way the Shroud was cut to fit Jesus mimics exactly the specifications for the high priest's robe, including the sash, which could be seen on the Shroud at the time of burial. Perhaps this was Joseph's way of giving Jesus homage that he considered the true ‘high priest.’

We know from Luke 23:53-56 that Jesus had been laid in the tomb. It was Preparation Day and the Sabbath was about to begin. The women who had come with Jesus followed Joseph and saw the tomb and how his body was laid in it. Then they went home and prepared spices and perfumes. But they rested on the Sabbath in obedience to the commandment. In 24:1 we learn that “On the first day of the week, very early in the morning, the women took the spices they had prepared and went to the tomb.” John the Beloved writes, Jn. 19:39-40 (paraphrase): He and Nicodemus brought a mixture of myrrh and aloes, about seventy-five pounds. Taking Jesus' body, the two of them wrapped it, with the spices, in strips of linen. This was in accordance to Jewish burial customs.

What did John see and believe as he entered the tomb? “Peter and the other disciple started for the tomb. Both were running, but the other disciple outran Peter and reached the tomb first. He bent over and looked in at the strips of linen lying there but did not go in. Then Simon Peter, who was behind him, arrived and went into the tomb. He saw the strips of linen lying there, as well as the burial cloth that had been around Jesus' head. The cloth folded up by itself, separate from the linen.” (*Would a robber have taken time to fold up the cloth?*). “Finally, the other disciple, who had reached the tomb first, also went inside. He saw and believed. (They still did not understand from Scripture that Jesus had to rise from the dead.)” John 20:3-9.

Why did Mary Magdalene not recognize Jesus? Verse 14, why did Jesus tell Mary not to touch him, as he had not returned to the Father? Verse 17, but bade her to tell his brothers that he was returning to his Father, and their Father, to His God and their God. What changes had taken place from then until later that evening when he stood amongst them? (v19)

Was there some radiant force that impregnated the burial cloth with his image? Did John see and believe that some power or force, far greater than his ability to comprehend had occurred within the tomb and transformed Jesus into the spiritual realm? How did the Jesus of the transfiguration differ from the

Jesus raised from the dead? How did he differ from his encounter with Mary Magdalene at the tomb and *after he returned from his Father*, allowing Thomas to touch him but forbidding Mary to do so prior to His *going to His Father*? (Please note, scripture does not state that Jesus went to His Father but it is implied in that He allowed Thomas to touch Him, but denied Mary the same opportunity).

Luke writes of the disciples being startled and frightened, thinking Jesus to be a ghost. He asked them for something to eat which he took and did eat, Luke 24:37-43. The disciples understood the impossibility of a physical body passing through physical barriers. That is why they concluded that the form of Jesus in front of them was a ghost. But Jesus proved His physical reality by allowing the disciples to touch Him and by eating food in front of them. Though it is impossible for three-dimensional physical objects to pass through three-dimensional physical barriers, Jesus had no problem with this.

The astrophysicist, Dr. Hugh Ross, in his recent publication: *The Creator and The Cosmos*, which explains how the greatest scientific discoveries of the century reveal God, relates how particle physics is involved in more than the four dimensions in which we normally operate. All workable theories for the unification of the four fundamental forces of physics require that a minimum of nine dimensions of space and time must have existed in the first instant of creation. Since God controls all of these dimensions, He must be able to fully operate in them all. Who is to say that he does not operate in spiritual dimensions completely distinct from space and time?

How then do we as Christians respond to the Shroud of Turin? Is belief in its authenticity necessary for our faith or even our salvation? Not hardly. Our faith is grounded on the Word made Flesh. Would the authenticity of the Shroud be of any value to the world of today? A resounding yes! When we look back at the early church, we find numerous instances of miraculous healing. Jesus healed many persons during His ministry. This was done out of compassion and as a sign to unbelievers. Believers do not need a sign but should the unbeliever recognize Jesus through the Shroud and the continued faithfulness of His body, the Church, then all of the research and scientific investigation would be worth the time and effort.

Other Scriptural passages:

Luke 24:39 "Why are you troubled, and why do doubts rise in your minds? Look at my hands and my feet. It is I myself! Touch me and see, a ghost does not have flesh and bones, as you see I have."

Luke 24:15 "As they talked and discussed these things, Jesus himself came up and walked along with them."

John 21:9 "When they landed, they saw a fire of burning coals there with fish on it, and some bread."

Luke 21:41-43 "Do you have anything to eat? They gave him a piece of broiled fish, and he took it and ate it in their presence."

John 20:27 "Then he said to Thomas: Put your finger here; see my hands. Reach out your hand and put it into my side. Stop doubting and believe."

Acts 6:7 "So the word of God spread. The number of disciples in Jerusalem increased rapidly, and a large number of priests became obedient to the faith."

Acts 1:8 "But you will receive power when the Holy Spirit comes on you; and you will be my witnesses in Jerusalem, and in all Judea and Samaria, and to the ends of the earth."

Luke 24:34 "....It is true! The Lord has risen and has appeared to Simon."

1 Cor 15:3-7 "For what I received I passed on to you as of first importance: that Christ died for our sins according to the Scriptures, that he was buried, that he was raised on the third day according to the Scriptures, and that he appeared to Peter, and then to the Twelve. After that, he appeared to more than five hundred of the brothers at the same time, most of who are still living, though some have fallen asleep.

Then he appeared to James, then to all the apostles, and last of all he appeared to me also, as to one abnormally born.”

James 2:1 “My brothers, as believers in our Lord Jesus Christ, don’t show favoritism.”

Sources:

Time Magazine: Can There Be Truth to the Shroud? April 29, 1998 Vol. 151 No 15

Liguorian: The Shroud of Turin. April 1998 Vol. 86 No 4

A Surgeon at Calvary...remembered details. (*)

The Blood and the Shroud: Ian Wilson

The Creator and the Cosmos: Hugh Ross, Ph.D.

(*)A Doctor at Calvary by Pierre Barbet, M.D.

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James R. Alsop May 1, 1998 AD

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(*) Several weeks after completing the above, the original book was located and returned after some thirty-five years. The correct title is “A Doctor at Calvary” - The Passion of Our Lord Jesus Christ as Described by a Surgeon, written by Pierre Barbet, M.D. and translated by The Earl of Wicklow. The publisher was P. J. Kenedy & Sons, New York and was printed initially in France in 1950 and the United States in 1953. Library of Congress Catalogue Card Number is 54-5015. According to the World Wide Web, there have been nearly one million inquiries although the book is out of print. Recently, it was found that the book was reprinted in 1998 and is now on back order.

Most recently, it appears that a renewed or perhaps an on-going interest in the burial cloth has revealed some astounding results. An audiotape, made by a speaker identified as Jack Sacco, dated March 3, 1996 on the Shroud of Turin, reviews the most recent results from carbon dating. In 1988, the carbon dating showed the shroud to be 600 to 700 years old, however; with newer technology, the shroud is now identified as being at least 1900 years old.

The shroud is made of pure linen and the type of loom used to weave the linen was first century technology, as well as the weave. It was 3 to 1 herringbone twill. In the shroud there are pollens from the area of Jerusalem, some of which have been extinct for 1500 years. Although the shroud is pure linen, there are traces of cotton. Ancient Jewish custom said that the cloth, used for any burial purposes had to be made of pure linen but allowed for some cotton when the linen was woven on the same loom that had been used for cotton. Wool was never allowed. The cotton traces are from a variety grown in the first centuries around Israel.

Some of the pollen on the shroud is from Europe as the shroud had been in Europe for some 600 years. There is also a great deal of pollen from three other places - Constantinople (Istanbul), Edesa (Erpa in Turkey) and pollen from Jerusalem. The pollen from Jerusalem is woven in the cloth. To bleach the linen, it is placed in the water streams and then placed on the grass to dry. This process is repeated many times, wetting and drying, over and over again. As the pollen in the stream of water adheres to the linen, subsequent wettings add to the pollen concentration in the linen threads. Those pollen then remain and are woven into the linen cloth. The person who wove the cloth, because of the twist in the weave, was left-handed.

Other interesting and impressive facts are that the limestone found on the shroud is identified with limestone found only at the burial site, or the tomb in which Jesus was laid following the crucifixion. Also, the victim was a male as evidenced by the dried blood analysis, which showed the xy chromosomes. He had type AB blood and was 5’11” tall.

The speaker projects some of the events of the passion and death of the crucified one from scientific observations of the shroud. It appears that two persons did the scourging, one taller than the other. The thorns hammered down into the skull that were in the crown of thorns were, at best estimates, two inches long. The victim's head was struck many times with a rod and the nose was dislocated. There is evidence that he fell several times while carrying the 130 to 140 pound beam over his shoulder. Further, that he fell many times on his knees, face and chest. The beam evidently slide across his back and pinned him down each and every time he fell.

There is considerable speculation by the speaker however; when he states that the victim died of a ruptured heart brought about by the chest trauma as result of the several times that the victim fell under the weight of the cross beam. Granted, there occurs, as a result usually of severe car accidents, a trauma to the heart that causes many microscopic incisions within the heart tissue. Such a fatal condition was expressed as blunt chest trauma. The speaker reports that, after the cardiac rupture, there were several hundred cubic centimeters of fluid, which leaked out from the heart, and the victim died in two minutes. Of course, this flies in the face of what scripture reports and that is that Jesus gave up the Ghost. To give up the Ghost, one would have to allow his body to sag down and not revive himself by pulling back up in order to breath. Jesus had total control over his body and the strength to breathe should he wish to continue the struggle. He chose instead to finalize the redemptive sacrifice as all things had been accomplished. *Consummatum est! Et inclinato capite, tradidit spiritum.*

The source of blood and water, as expressed by John in his gospel, again comes into question. Dr. Barbet has very effectively, through experimentation with several corpses, demonstrated that the blood flow resulted from the spear incision into the right atrium which would be filled with blood from the inferior and superior vena cava and that the water (hydropericardium) came from the sac encasing the heart. There was considerable amount of this watery fluid. By contrast, the speaker addresses the idea of a ruptured heart due to the traumas resulting from the fall impacting the chest and then later speaks of the heart being pierced, followed by the flow of blood and serum. Further, that the victim's body was stiff when the heart was pierced. If he alludes here to *rigor mortis*, it should be noted that the rigidity of death begins only after eight or more hours.

There is some comment about the corpse not going into the decay process while in the tomb. The body, according to the scientific researchers, began to reorder itself and became perfect to a state of super order. In this super order state, time and space would not be relevant and the cloth would fall flat in the tomb. It was the energy left over from this reordering of the body that burned the images onto the shroud. This energy did not cause the resurrection but the resurrection caused the energy. He points out that there were quantum mechanics and physics involved during this reordering process.

Assuredly, something miraculous and wonderful happened within the tomb. There is no reason why future understanding of the many other dimensions, of which we have limited knowledge, might well play a role in explaining this phenomena or super ordering of a deceased body resurrected from the grave. But didn't the ancients refer to this as *His Glorified Body*?

Comments, properly documented where practical, are invited. Please reply to:

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(Copies available: www.HolyArtWorks.com click on Shroud of Turin and print.)

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