

RESEARCH ARTICLES (3)

THE GREAT FIRE OF 1532

Hugh Farey

The story goes that in 1532, while the Shroud was kept in a silver reliquary in the Sainte Chapelle at Chambéry, a fire broke out and destroyed the chapel, as a result of which the Shroud was badly damaged. It is often claimed that the reliquary was kept in a small niche in the north-east wall of the chapel, immediately behind the high altar, protected by an iron grill fastened by four padlocks. The niche is still there, and seems to bear witness to the truth of the story.



[The Royal Palace, Chambéry.

The Sainte Chapelle is the tall building with the curved and buttressed wall to the right. The site of the niche (on the inside) is marked with an arrow. The sacristy is in the bottom of the rectangular tower attached to the Chapel.]



Above left: The Sainte Chapelle in 1903, from an old postcard.



Above right: The Sainte Chapelle today, having lost its decoration.

Right: The niche behind the high altar in which the Shroud is supposed to have been kept.



The primary source for information about this fire is Filiberto Pingonio's *'Sindon Evangelica'* (1581), written in Turin about 50 years later, although Pingonio, a senior cleric at Chambéry at the time, seems to have been an eye-witness. He says the fire broke out on the eve of the feast of St Barbara (4 December), and that Canon Philibert Lambert, a blacksmith called William Pussod and a couple of Franciscan friars ran through the flames to rescue the Shroud. Pingonio does not describe the whereabouts

of the Shroud, but presumably there were other sources, as Lazzaro Giuseppe Piano, in *'Comentarii critico-archeologici sopra la SS. Sindone di N.S. Gesù Cristo venerata in Torino'* (1833), gives many more details. However, he says that the Shroud was actually kept in the adjoining Sacristy, not in the niche in the chapel wall, for safety.

“Contro il muro circolare della Santa Cappella di Ciamberi alla destra, ed alla sinistra dell'unico grande altare di marmo, eranvi i sedili di legno dei Canonici, oltre varii altri banchi per li cantori, i quali da una parte erano vicini alla porta della sagrestia, dentro cui serbavasi in preziosa Cassa sotto quattro diverse chiavi la SS. Sindone, quivi appunto riposta, perchè dessa la sagrestia essendo a guisa di forte torre, potevasi di leggieri impedire l'ingresso, ed erano più sicuri i tesori della Cappella.”

“Against the circular wall of the Sainte Chapelle, to right and left of the great marble high altar, were the wooden seats for the canons, and also various other benches for the choir, which were on one side close to the door of the Sacristy, in which was kept, in a precious chest under four different keys, the Holy Shroud, which was placed there precisely because the Sacristy, being like a strong tower, was able to prevent easy entry, so that the treasures of the chapel could be kept there more securely.”

Dorothy Crispino, in *Shroud Spectrum International Issue 2, 1982*, gave an even more detailed account. According to her the Shroud was kept in the niche, and the fire broke out in the Sacristy. It was the grill of the niche that was secured by four padlocks. This I think derives from André Perret (whom she misprints as André Ferret in SSI) in his *'Essai sur l'histoire du Saint Suaire du XIVe au XVIe siècle'* in *'Mémoires de l'Académie des Sciences Belles-Lettres et Arts de Savoie'* (6ième Serie, Tome IV, 1960). Perret quotes the 'Act of Translation' of the Shroud to Chambéry in 1502, saying that the Shroud was placed “in quodam armario in ipsa capella et infra menia ipsius et contra ipsum magnum altare constructo”, which I translate as “in a special niche in the chapel, built within the wall opposite the high altar.”

Where exactly the Shroud was stored on the night of the fire is important. Silver melts at 962°C , and it is doubtful if a silver casket could have achieved that temperature while stored behind bars in a niche in a wall. If, by some chance, the temperature did reach that, in one corner of the reliquary, then such is the thermal conductivity of silver (eight times that of iron) that the whole box would be extremely hot, and the cloth inside destroyed.

Here is a photo of a cloth folded in 32 layers as described by Aldo Guerreschi and Michele Salcito in *'Photographic and Computer Studies Concerning the Burn and water Stains Visible on the Shroud and their Historical Consequences'* at <http://shroud.com/pdfs/aldo3.pdf>:



It was placed in a tin, with the lid on, and then in a cold oven which was then turned on to 240°C for an hour. After retrieval, it looked like this: (right), and when unfolded, like this (below).



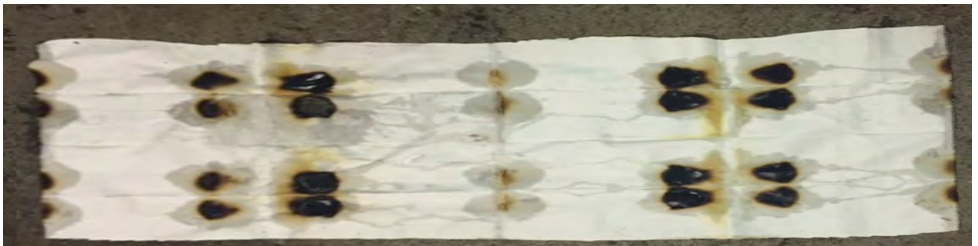
I do not think it is possible that a cloth in a melting silver casket could be any less charred, and am therefore persuaded that

the damage to the shroud was not due to that. However Guerreschi and Salcito had already come to the same conclusion, suspecting that the burn holes were in fact made by a heated metal bar which broke through the casket and landed on the cloth. Nevertheless, it would still have to be very hot to burn through 32 layers, so, as my laboratory is unable to achieve more than 'Bunsen Burner' temperatures, I sought the assistance of Adrian Legge, one of Britain's most experienced blacksmiths, at his forge on Bringsty Common, Herefordshire, who heated various bars of iron (we couldn't afford silver!) and placed them on folded linen. The results were interesting and informative. Firstly, placing a bar of iron (about 80 x 50 x 5 mm) at 800°C - 1000°C on cloth exposed to the open air immediately resulted in the top layers catching fire, and burning out away from the bar, in a manner quite unlike any of the marks on the Shroud.

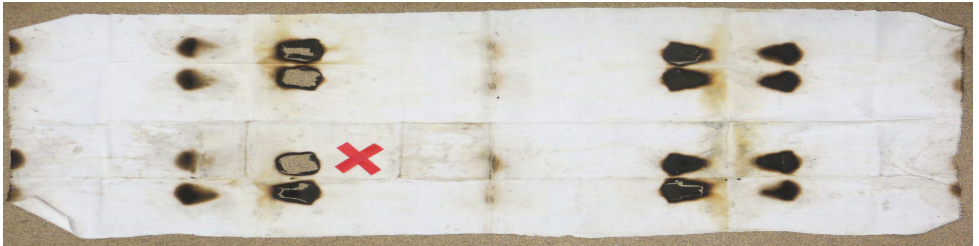
Placing the cloth in a tin, however, and laying the lid quickly over it so as only to leave a small air-gap, was much more satisfactory. After a splash of water to cool it down, the result looked like this (right):



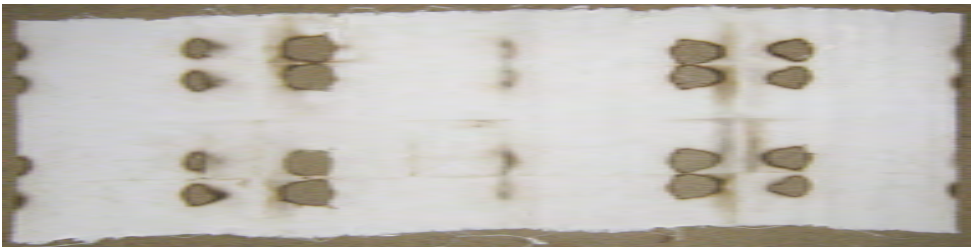
After unfolding, the cloth looked like this (below), which is in my opinion a reasonable simulacrum of the damage to the Shroud.



Back in the laboratory, the cloth was dried and examined. It was fairly filthy, with charred bits of cloth staining it.



However, after washing, so much of the blackened edges had been removed that I am inclined to think that the Shroud was not washed before being patched, although presumably it was at least wiped or brushed. Here is my finished article.



In some ways it compares quite well with the 2002 restoration of the Shroud, with the charred edges completely removed and the holes much bigger.

In their paper for the *Journal of Biological Photography* (Vol.49, No. 3, July 1981), '*Ultraviolet Fluorescence Photography of the Shroud of Turin*', Vernon Miller and Sam Pellicori summed up their main observations:

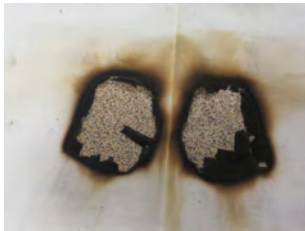
Background: "Yellow-green"

Blood: "No colour. Fluorescing borders apparent around some areas."

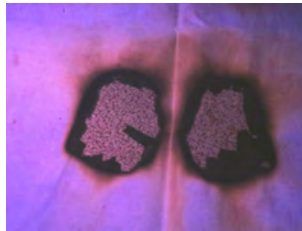
Image: "No color. Prevents or absorbs the background fluorescence."

Burns: "Dark-brown burns fluoresce brownish-red. The color reddens as the scorch density decreases."

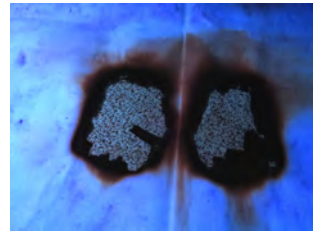
In numerous experiments in 2012, I had not observed any red fluorescence around burns I made myself, but did find that scorches, particularly light ones, fluoresced brightly. Because of this, I had rejected the idea that the Shroud image could be a thermal scorch, agreeing with the STuRP team that, since scorches always fluoresce, and the Shroud image did not fluoresce, the Shroud image could not be a scorch. However, inadvertently using a slightly different methodology for photographing the latest experiment, I was surprised to find that now when I initially switched my UV source on (a 173W tungsten filament 'Black Magic' lamp), I did observe a red fluorescence around heavily charred areas, and none around lighter scorches, which gradually became the more familiar yellow-green as the lamp warmed up.



Natural light



Red fluorescence
under lower
temperature UV



Red suppressed and
yellow-green dominant
under higher
temperature UV

It has been suggested that my 'black light' might emit different wavelengths of UV as it warms up, or that the 'red fluorescence' is no more than ambient red light reflecting off the cloth. However, a very low power battery-driven 'bank note detector' produces an effect similar to the third photo, and further experiments using a non-fluorescent red paper as the background to the holes show that insufficient red light is reflected to be detectable. More investigation here may have interesting implications for the idea that the Shroud image cannot be a scorch.