

## BRITISH PROPOSALS FOR SHROUD TESTING PRESENTED TO CARDINAL BALLESTRERO OF TURIN

The British proposals for Shroud testing, mentioned in earlier *Newsletters*, have now been formally presented to His Eminence Archbishop Anastasio Ballestrero, Cardinal of Turin. The document, specially translated into Italian by Mrs. Maria Jepps, was handed over by Ian Wilson, representing the British Society for the Turin Shroud, during a half-hour meeting at the Archbishop's office on 2nd. July. To help discussion Professor Luigi Gonella acted as interpreter, and the Cardinal explained fully and frankly the current situation regarding any further scientific work on the Shroud. While he personally had been pressing for this, the outcome was awaited of ideas for the formulation of a Pontifical Commission, and any final decision rested with Rome. Patience was needed because of the pressure of other priorities on the Pope's time.

On behalf of the ecclesiastical authorities Cardinal Ballestrero warmly received the British proposals, and was presented with a now rare book on the Christ face in art, published in 1939.

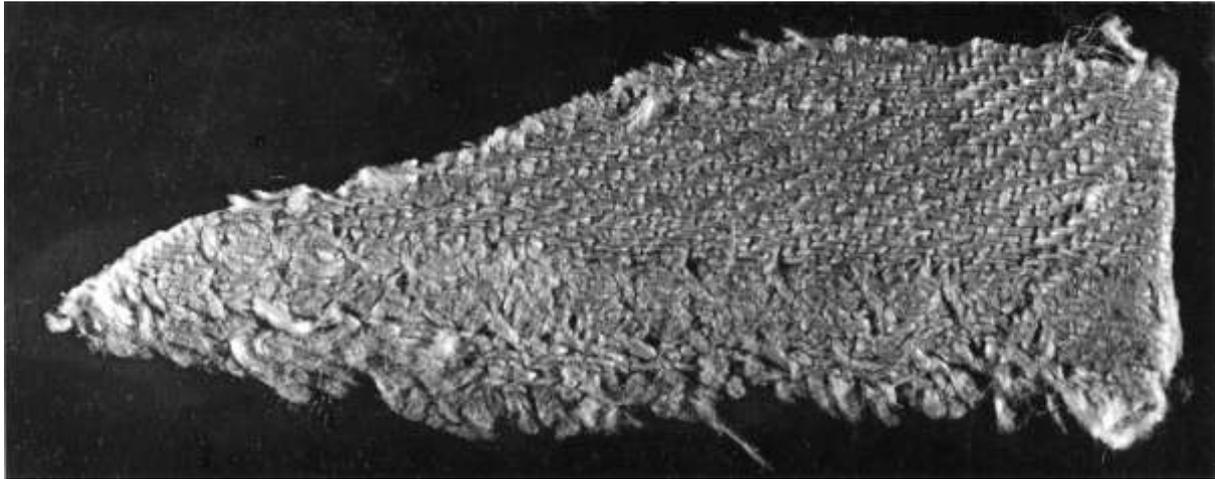
### Scope of the British Proposals

The British proposals have been prepared in full consultation with STURP and other groups, and in the spirit of Cardinal Ballestrero's plea for international collaboration and cooperation have been designed to supplement rather than to compete with recommendations made by other Shroud organisations. With regard to radiocarbon dating, for instance, Ian Wilson stressed to Cardinal Ballestrero that most people in Britain regarded this as the single most important item of testing work needing to be done on the Shroud. Although the projects itemised in the British proposals do not specifically include this, this is only because the involvement of two excellent British laboratories, Oxford and Harwell, is already catered for in the radiocarbon dating proposals submitted last year by Dr. Robert Dinegar of STURP.

In essence the British proposals have been designed to bring to the subject expertise not represented or available to other groups; also to provide a fresh, independent approach in areas where there is a serious conflict of professional opinion.

The main elements of the proposals are summarised in the next six pages.

## Textile Analysis



The small fragment of the Shroud removed in 1973 for analysis by Belgium's Professor Gilbert Raes

One particular field in which Britain has a fund of specialist expertise to offer is that of the archaeology of textiles, and the British Society has been fortunate to receive the willing involvement, in any fresh opportunity to examine the Shroud, of Dr. John P. Wild, Senior Lecturer in Archaeology at the University of Manchester, and close colleague Gillian Eastwood, a Manchester-trained specialist in Near Eastern archaeological textiles currently living in the Netherlands. Dr. Wild and Miss Eastwood hope to give particular attention to study of the edges of the Shroud, potentially valuable for clues to the Shroud's history and origins, yet neglected by previous researchers because these are normally hidden by the Shroud's protective blue surround. As remarked by Miss Eastwood in her recommendations:

"The existence or otherwise of some form of end or selvedge needs to be determined and properly documented. Similarly the published works concerning the Shroud make no reference to the type of seam used - an aspect of the subject in which I am particularly interested. Currently I am developing a typology of seams which were used in Egypt and the Near East. This typology stretches from the fourteenth century BC. (the site of Tell el'Amarna, Egypt), to the early sixteenth century AD. (Qaseir al-Qadim, Egypt). Although it should be stressed that any individual seam cannot be taken as conclusive evidence of origin, nonetheless it would be interesting to know, whether the intriguing lengthwise seam to one side of the Shroud fits within this typology of Near Eastern seams and hems. In addition it would be important to determine the original function of this seam. It may have constituted an original extension, or it may derive from a later repair ..."

Additional expertise on the Shroud's manufacture as a textile would, of course, be forthcoming from Manchester textile analyst and B.S.T.S. member John Tyrer, already well-known for his talks to the Society on this subject.

## Microanalysis

Where British specialists would hope to resolve a particularly difficult prevailing controversy is in the field of microanalytical study of the Shroud's body and blood images. It is well known that Doctors Heller and Adler of Connecticut identify the "body" stains (i.e. those of

the face, beard, and other physical features) as deriving from some form of cellulose degradation, and that they identify the "blood" as genuine blood, determinable by some eleven different tests. It is equally well-known that the Chicago microanalyst Dr. Walter McCrone, working from the very same set of samples, has insisted that both types of image are composed of iron oxide in a gelatin binding medium, and are thereby the work of an artist. Such contradictions have caused inevitable confusion and uncertainty at all levels of Shroud inquiry, and have been further complicated by the known fact that it was commonplace during the sixteenth and seventeenth centuries for artist copyists of the Shroud to press their works against the original (with the intention of giving these greater holiness), thereby inevitably transferring misleading paint dust to the Shroud's surface.

Accordingly, in view of the obvious need for independent appraisal, the British Society has been fortunate to receive the willing involvement in any fresh opportunity to examine the Shroud, of Dr. Geoffrey Allen, visiting Professor of Chemistry at the University of Southampton and senior scientific adviser to the Berkeley Nuclear Laboratories in Gloucestershire. At the Berkeley Nuclear Laboratories, part of the facilities of the Central Electricity Generating Board, Dr. Allen's equipment includes apparatus for scanning electron microscopy (SEW), energy dispersive X-ray analysis (EDX) and electron microprobe analysis (EPMA), together with equipment for two new methods which he considers may be particularly valuable for Shroud studies, scanning angle microanalysis (SAM) and scanning ion microscopy (SIM). Such equipment would be made available for study of Shroud samples, and as pointed out by Dr. Allen, the amount of sample required from "body", "blood" and non-image areas, would be so small as to be all but invisible. These would be teased from the Shroud's surface using scalpel or fine needle, rather than by sticky tape, which is considered too unselective a method. Backing up Dr. Allen's analyses from the forensic viewpoint would be Professor James Cameron, Professor of Forensic Medicine at the London Hospital, together with haematologist colleague Dr. Patrick Lincoln; also Dr. Graham Divell and colleagues at the Metropolitan Police Scientific Laboratory, Lambeth Road, London. As remarked by Dr. Allen in his proposals:

"The results obtained could be more definitive than those obtained hitherto because the chemical and physical properties of materials depend greatly on their composition and structure at the microscopic levels. The ability of the most modern techniques to probe the nature of such small areas of materials with high sensitivity and selectivity should greatly aid their characterisation of subtle surface variations."

#### Ancillary examinations

While the above recommendations are considered the most important elements in the British proposals, certain additional suggestions have also been included in the hope that they may disclose features or facets of the Shroud as yet unrealised. At the Metropolitan Police Scientific Laboratory in London one particularly useful method developed in recent years has been the study of surfaces of interest using a diffused laser beam. In criminal detection work this has shown up otherwise invisible shoeprints, fingerprints, erased writing, differences in inks, clothing stains, differences in paints, fibres, etc., often where all other methods have failed.

The method is entirely safe and non-destructive of the object under examination, and although previously items for study have needed to be taken to a specialist laboratory, recent developments with a Neodymium Yag laser promise to make the technique portable and

therefore readily applicable to the Shroud. Mr. Kenneth Creer of the Metropolitan Police Forensic Science Laboratory has kindly volunteered his services and equipment for any fresh study of the Shroud.

In addition, fresh work in ultraviolet light photography has been proposed by London Hospital photography specialist Raymond F. Ruddick. And a proper, photographically documented survey of the underside of the Shroud, using a urological endoscope to obviate the need for removal of the Shroud's backing cloth, has been volunteered by Professor John Blandy, Professor of Urology at the London Hospital Medical College.

#### Recommendations to other groups

As already stressed, the British proposals have been designed to supplement rather than to compete with the work of others, and a project strongly urged on the part of other researchers is one to check the pollen analyses of the late Dr. Max Frei. While unfavourable remarks have sometimes been made about Dr. Frei's methodology, such remarks can only be considered unjustified and unsubstantiated without a replication of Dr. Frei's work on the part of some other acknowledged expert in the same field. Although such experts are rare, it is understood that the U.S. based group ASSIST has procured the cooperation of Dr. Aaron Horowitz of the Tel Aviv University Institute of Archaeology who, it is hoped, will provide a particularly valuable contribution.

Overall, it should be everyone's aim that when the ecclesiastical authorities do permit a fresh study of the Shroud - as they surely must - this should be a model of international understanding and cooperation.