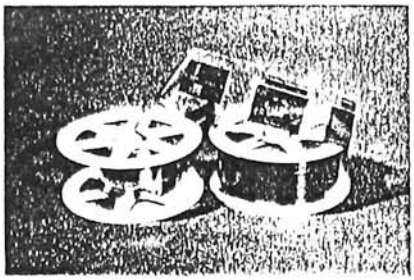
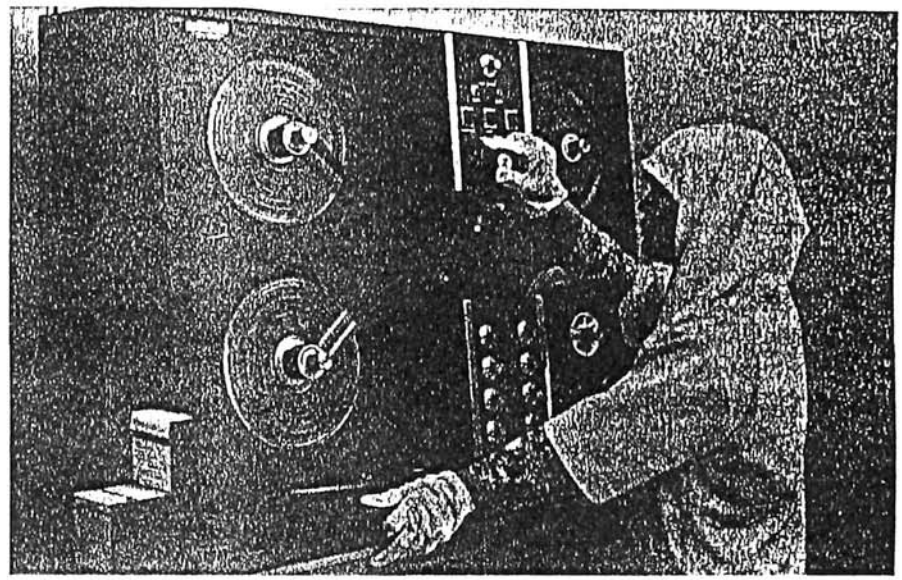


Past and Present Preservation

The National Archives of Malaysia Experience

by Norizah bt Hj. Abdul Talib



How do you galvanize a department, company or country, so that from top to bottom it is geared for success? How, in a word, do you lead? Questions like these are often answered with the pat solutions and manipulative techniques of so many management books.

They form the principles. These principles, in fact, lay down the "parameters" for operation or action. From then, innumerable other parameters can be laid down. These and others form record of action or otherwise in the department, company or country. With the passing of time, we might even regard the actions taken in such events as "history" – rating them as history with a good "lead", a mediocre, a bad and others.

History almost always repeats itself. It is therefore well worth preserving the past, to help understand the present and gauge the future. Preservation calls for a conscious effort on the part of all, especially the people saddled with the responsibility.

Systematic preservation of a nations's heritage necessarily calls for the setting up of an organized administration unit. It is this realization of the importance of recording happenings, ideas, actions, the late and recent past; coupled with the need to preserve them centrally, with a view to using them presently, that most archives are conceived and set up.

THE ARCHIVES FUNCTIONS – STATEMENT OF PRIORITIES AND IMPORTANCE

Each member country of SPAFA has her own national archives. The rich cultural background of each country, the respective national languages upheld, and the particular names by which the national archives of each member country is known, may be widely different in sound. However, they are bound by the main objectives, the basic functions for which they are established in the first place.

Time and again they set out and settle with the following three main functions:

1. Acquisition, be it records or archives and encompassing all processing functions;
2. Conservation, the life-giving and life-saving function;and
3. Research and reference, the window to the archives.

There will essentially be nothing to preserve and restore, if the acquisition function had not been started and mastered. The word "mastered" emphasizes that elements of planned acquisition and established methods of processing, including criteria for selection and appraisal. Research and reference too will not be possible if the materials acquired are badly damaged. Hand in hand, the three main functions move to assist in meeting the main objectives of the archives.

SCOPE FOR CONSERVATION

The scope for conservation is invariably and necessarily dependent on the types of materials, especially the base and support materials of the holdings held; the volume; the level of technical knowledge of the staff; staff strength; budget; planning and vision. The bulk of the holdings of the National Archives of Malaysia is paper-based, whether public or private.

There is a modest, but growing collection of films, photographs and sound recording. These are held not only at the headquarters of the National Archives, but also at its seven branch offices – five in Peninsular Malaysia and two in Sabah and Sarawak.

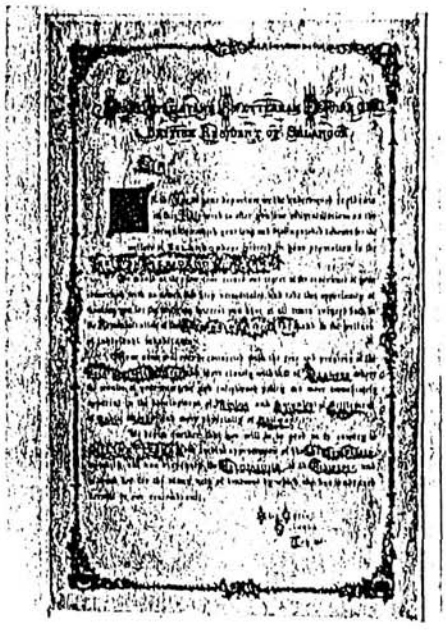
The point of entry for public records, in the form of administrative files into the National Archives of Malaysia, is through the Record Service Centre. It is situated in Petaling Jaya, a satellite town some 15 km from the headquarters in Kuala Lumpur.

Opposite Page :

Picture on the top left shows fungus found on the master copy of a microfilm. Fungus in caused by dirt, frequent and bad handling of film, and uncontrolled temperature in the storage area. Fungus can be removed by cleaning the film with water in a processor. A drop of photo flo is added to give a better result.

Duplication of a microfilm from a master negative to a positive copy microfilm through the use of a duplicator machine is shown at upper left photo. The duplicating process of a roll of 100 ft. takes approximately 15 minutes to complete.

Shown below is one of the documents held in the private papers collection of Sir Frank A. Swettenham, one time British resident of Selangor. This is a two-piece 1889 illuminated and handwritten record on parchment. The edges were attacked and weakened by fungi. They were fumigated using thymol and strengthened with parchment size and thymol.



Records at the Centre measured 6251.23 linear metres by the end of 1988. The repository at the headquarters has nine floors, each with a capacity of holding approximately 2196.92 linear metres of records. This works out to a full capacity of 19,772.28 linear metres for the 9 floors.

Conservation activities are centred in the Conservation and Reprography Division, which has a staff strength of 51. All professional staff are trained. Two of the restorers underwent training at the Camberwell School of Art, London.

One was trained for three months in paper conservation while the other did a two-year diploma course in conservation. The Assistant Archivist successfully completed the diploma course in Fine Bookbinding and Restoration at the Guildford County College of Technology, Surrey, United Kingdom.

The economy of a country is always reflected in the budget of its administrative departments. The size of the budget governs the operations of the department and so on.

Over the years, the conservation budget, excluding emoluments stood at the following figures:

1986..	..M $ 151,962.00
1987..	..M $ 114,436.00
1988..	..M $ 137,452.00
1989..	..M $ 155,150.00
1990..	.. being tabled

CONSERVATION ACTIVITIES IN BRIEF

Emphasis is the same as in all other archives institutions. Records and archives are fumigated; cleaned;

This is a map damaged by acid and age. The paper is weak and brittle, the coloured parts are faded and the writing less legible. Suggested actions are deacidification with Magnesium Bicarbonate Solution; map to be reinforced using English hand-made paper and gossamer nylon; and repaired by the traditional method.

tested for acid content prior to deacidification; repaired, whether by traditional method of repair or by lamination; bound; and titles tooled.

The points which I hope to bring out here are those which record changes. They cover the followings, to mention a few:

1. Fumigation
2. Deacidification
3. Repair
4. Binding
5. Adhesives

Fumigation

Fumigation is carried out both at the Record Service Centre and at the Conservation and Reprography Division. The former conducts bulk fumigation while the latter does fumigation on a small scale.

In the early years, the Conservation Division conducted fumigation using paradichlorobenze in a cabinet measuring 40″×20″×54″. The cabinet had racks which were adjustable. The formula was one kilogramme of paradichlorobezene to one cubic meter of space. Each fumigation took 14 days and six standard boxes of archives were fumigated each time.

This method rid the archives of insects. For fungus infestation, a solution of 100 grammes of thymol in one litre of methylated spirit was used. The solution was either sprayed or brushed on.

Fumigation is currently carried out in a fibreglass container measuring 40″×30″×24″. Either magtoxin or phostoxin pellets are used. This method takes only 3 days.

Deacidification

In principle, the W.J. Barrow Single Stage Immersion Process of Deacidification is used. Its formula has been adjusted over the years. To date, three have been recorded.

Formula I.

Calcium Carbonate ... 54 gms
Magnesium Carbonate ... 540 gms
Water ... 6 gall
Carbon Dioxide gas (co_2)
... bubbled in for 2 hours.
Documents are soaked for 18–20 hours and then dried at the racks.

Formula II.

Magnesium Carbonate ... 8.5 gms
Water ... 1 lit
Carbon Dioxide gas
... bubbled in for 2 hours.
Documents are soaked for 30–45 minutes and then dried at the racks.

Formula III.

Magnesium Carbonate ... 4 gms
Distilled water ... 1 lit
Carbon Dioxide gas

... bubbled in for 30 minutes. Bubbled in for two hours if it is 100 liters of distilled water.
Documents are soaked for 20–30 minutes and then dried at the racks. Formula III is currently in use and found to be very satisfactory.

Repair

Archives are repaired either by the traditional method or by lamination Two types of traditional repair are practised, namely: full repair and tissue repair.

For full repair, a document is given a major face lift. Missing corners and holes and filled, if possible, with identical type of paper. Minor tears are mended and the document is mounted on a piece of backing material, such as handmade paper or strong Japanese tissue.

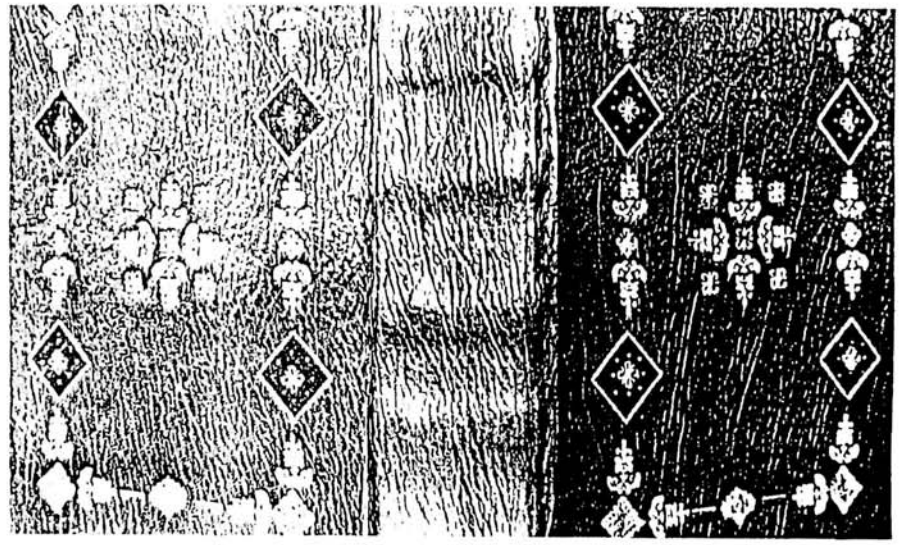
If it is too brittle and liable to be broken into pieces, its surface is further lined with a piece of support material such as silk, chiffon or lens tissue. Most handwritten manuscripts and documents, maps and plans are repaired thus. It is especially suitable for materials written on one side only.

Tissue repair is for typewritten documents, or even printed matters, and for documents written on both sides of a page. The document is sandwiched between two pieces of lens tissue. Carboxy methyl cellulose (CMC) paste is applied on both sides of the documents and dried under light pressure.

Change has been minimal in traditional repair. If any, only the choice of repair materials has increased. Initially British handmade paper was used.

This was followed with the use of Indian handmade paper. Kozo Shi 15, from Japan is currently being used. The fibers are long and soft and best used with starch as adhesive.

Repair through lamination continues. Both solvent and heat lamination are used.



This book was bound on goatskin using the Islamic binding method. The text was sewn on tape with a hand-sewn headband. Designs on the cover are gold-tooled.

The fully decorative and beautifully handwritten text was badly damaged by insects and acid. It was deacidified using barium hydroxide in methanol. Repair materials included English handmade paper, lens tissue and wheat starch. Repair was conducted by Senior Restorer, Ismail bin Haji Salleh. Binding and finishes were done in 1987 by Idris bin Md Zain, Assistant Archivist.

Binding

In the past, most of the binding works done were simple. Currently, the emphasis is on sharing of knowledge and skill on fine bookbinding and restoration techniques.

Leather binding on very select archives was started in 1986. Amongst the latest works undertaken by the National Archives of Malaysia are the repair and binding of two volumes of the Quran – one handwritten and the other printed.

Adhesives

A number of adhesives have been tried in our conservation works. Initially corn flour was used, followed by tapioca flour, wheat flour, sodium carboxy methyl cellulose (CMC) and rice starch.

Both CMC paste and wheat flour are currently used at the National Archives. CMC paste can also be used for sizing. It is effective when used on thin paper with a thickness of 0.002 inches. Thicker paper create air bubble problems and are unable to hold or stick well.

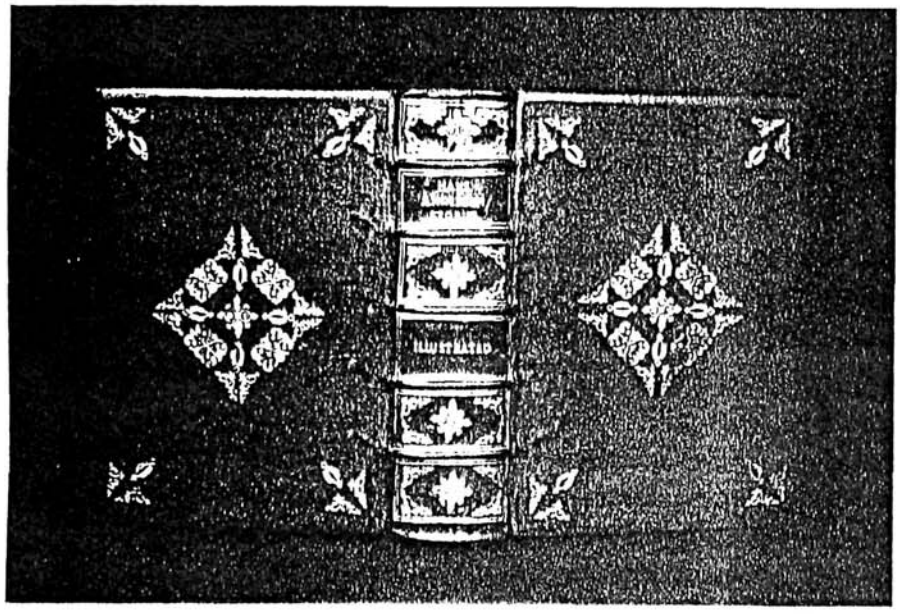
LABORATORY CONSERVATION

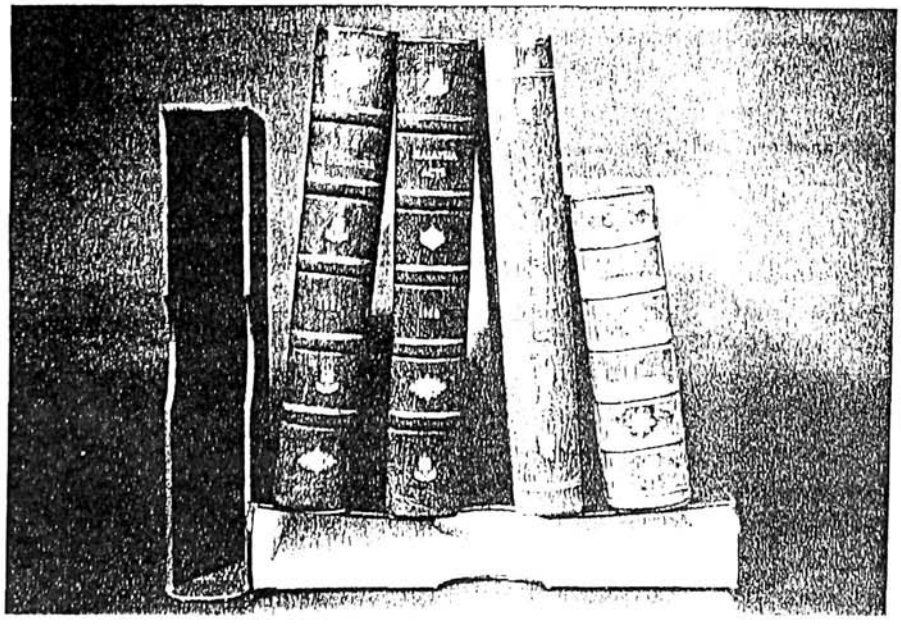
This is a modest laboratory, set up especially to run tests on chemicals and materials used in conservation works. It also handles tests on new methods of repair and restoration, compiling literature in the course of the work.

With time and emphasis, it is hoped that quality control on all conservation output can be centralized in the laboratory.

Work actually got off the ground in 1983. Emphasis was on paper. Amongst the tests run were fibre tests, tensile strength, folding endurance and bursting endurance. The results on samples of papers used are on the table at the right.

Paper type	Tensile Strength		Folding Endurance (fold)	Bursting Strength (lb/in)
	Extension (MM)	load (N)		
Handmade Paper (England)	*7.13*	*47.2*	*2115*	*20.5*
Handmade Paper (India)	*11.34*	*55.3*	*2869*	*24.5*
Blotting Paper	*6.38*	*32.2*	*17*	*11.5*
Tissue L_2	*6.07*	*3*	—	*1.10*
Tissue Kuranai	*6.68*	*10*	—	*0.88*





In 1988, the laboratory conducted simple tests to establish methods for the following:

1. Removal of rust stains left by paper clips on documents using
   1.1 Oxalic acid solution; and
   1.2 Vitamin C,
2. Removal of cellophane tape,
3. New formula for the preparation of the deacidification solution. This reduced the quantity of chemicals used and also the soaking time for the neutralization of acid,

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Upperleft: This is an example of traditional binding on calf with marbled endpapers and gold-tooled finishes. The book was sewn on cords with handsewn decorative headband. Binding was done in 1985 by Idris bin Md Zain, assistant archivist.

Left: Photo shows three original law books produced in 1948, 1951, and 1968 in traditional binding. Acid-free goatskin was used and the finishes fold tooled. The texts were sewn on tapes with handsewn headbands. The slip cases were made to protect the volumes from damage. A volume entitled "Han Anderson's Stories", bound in calf leather with marbled endpapers and gold-tooled finishes, is also shown in the picture.

A practical session on the cleaning of photograph negatives during the SPAFA Training Course on Conservation of Archival Materials, held in Kuala Lumpur from 1 November – 10 December 1988. Photograph shows Mr. Harald Bandes, expert from West Germany, explaining the methods of cleaning yellow spots found on photograph negatives by using Potassium Permanganate Solution.

4. Bleaching of documents.

Tests to ascertain the level of thiosulphate in microfilms, using the Methylene Blue Test Method, is currently a routine.

The holdings of the national archives in Southeast Asia are similar to those of the National Archives of Malaysia, in that they are largely paper-based. These records, which contain information of our national heritage, have constantly been threatened by destructive elements, such as environmental factors in external causes, internal causes or extraodinary (catastrophic) causes. National archives in each country have taken measures to combat further deterioration of their holdings and to ensure their preservation for use at the present and the future. This brief article was written with the hope of sharing the Malaysian National Archives' experiences with other archives in the region. It is believed this could strengthen confidence and set off a forum for discussion. ■

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