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Report on the establishment of an Arabic Manuscripts Conservation Laboratory at Arewa House

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During August 2015 a laboratory for the conservation of Nigerian manuscripts in Arabic script was established at Arewa House, Ahmadu Bello University, Kaduna, Nigeria.

Construction was finished in April 2015 allowing twelve weeks for paint and enamel off-gassing. The 7 x 6 meter room is equipped with ceiling fans and two wall mounted air conditioning units. There are two sets of metal double doors, each 1.25 meters wide, along the west wall. The floors are marble tile with no seams between the tiles for ease of cleaning. The stacked louvered windows are covered with washable plain cotton muslin curtains to lessen the intrusion of dust and insects. Counters are covered with formica with wood bull-nosing. There is a small sink for washing dust cloths, soiled texwipe blotters and hollytex fabric and two adjacent drying lines. The cabinetry is enameled metal.

In addition to a full range of hand tools, the lab is equipped with a variable speed control vacuum for cleaning manuscripts and a vacuum chamber pump machine for creating anoxic enclosures on bagged wet, moldy or insect infested manuscripts. As much as possible locally sourced materials, such as acid-free cardboard, and reusable, renewable materials, such as hollytex and texwipe, are being used.
Common treatments for the manuscripts include: surface cleaning to reduce superficial dirt; removal of mold and insect residue; elimination of self-adhesive tapes; separation from harmful leather wrappers and bags; mending tears; filling areas of loss; and lining fragile or fragmentary sheets with Japanese paper. Emphasis is on conservation for use, repairing only as necessary, so that manuscripts might be consulted and studied without further deterioration.

When a collection is sent to the lab it is first either brush cleaned or vacuum cleaned sheet by sheet. Each manuscript is then placed in a folder made of acid-free photocopy paper. Archival curators label the folders with the assigned collection initials and number. Manuscripts are then grouped in a custom made box.

Brush cleaning a manuscript sheet. The sheet is placed on a blotter for padding and then protected from hand oils by another blotter. All residues, in this case an accumulation of mud and insect parts, is gathered on another sheet of paper for ease of disposal.

Assembling the variable speed control vacuum.
Vacuum cleaning is used when manuscripts are covered with fine dust. Each side of each sheet is vacuum cleaned twice in varied directions through fine screening.

Cleaned and folded manuscripts are then housed in a custom-made box sized to fix the manuscripts.
Each technician has a personal tool kit of brushes, erasers, eraser shield, rubber sponges, straight edge, square, needle awl, surgical awl, tweezers, bone folder, Teflon folder (not shown), acid detection pen, Sharpie pen, polyester film for making infill patterns (not shown), scissors, Exacto knife, replacement blades, crepe adhesive pick-up squares (not shown) and a self-healing cutting mat. Each technician has a storage unit in which to keep tools, a supply of repair papers and work in progress.

Aisha Aminu and Alhassan Kargi, two of the conservation technicians, working on repairing manuscript sheets. When conservation work on an individual manuscript is complete, the date of completion and the name of the technician is recorded on the manuscript's folder.
Repair papers are custom tinted as necessary. Here a sample of white 7.5 gsm tenjucho custom tinted with dilute acrylic to match the colour of manuscript sheets.

Conservation Technicians Ismail Shehu and Mustafa Abubakar laying custom-made klucel coated 5gsm tenjucho out to dry.
Remants from a larger collection - a calabsh with manuscript fragments.

Manuscript fragments sorted into subject categories prior to cleaning.

Fragments placed in a folder, then humidified and placed under a light weight to flatten.
A manuscript sheet being arranged prior to backing with klucel coated tenjucho. The klucel adhesive is activated (re-moistened) with a spray of methylated spirits.

Tenjucho backed manuscript sheet being separated from hollytex support.

Manuscript storage at Arewa House Library and Archives - shelving units are placed some distance from exterior walls for ease of cleaning and to lessen the impact of seasonal temperature and humidity fluctuation.
CONSERVATION LAB PROTOCOLS

EACH WORKDAY:
Dust all worksurfaces
Sweep floor
Inspect lab
Assign duties
Empty trash
Wash hollytex/dusters/tools as needed
Record each conservator’s work in individual work books

ON LEAVING LAB:
Switch off electric power outlets
Check that all windows are locked
Check that water tap is firmly closed

MONTHLY:
Clean cobwebs from ceiling
Dust tops of ceiling fan blades
Damp (not wet) mop floors
Check vacuum cleaner bag contents

QUARTERLY:
Remove all items from all cupboards, dust cupboards and replace contents
Wash curtains

PRIOR TO ONSET OF HARMATTAN:
Seal windows in lab and mss storage room with removable rope caulk

ANNUALLY:
Inventory supplies
Clean and repair tools as necessary
Oil bone folders
Examine manuscript boxes’ contents in mss storage room

SUPPLIES AND EQUIPMENT

PAPERS:
Kitikata 30 gsm
Seikishu 20 gsm
Kizukishu 18 gsm
Tenjucho 7.5 gsm
Tenjucho 5 gsm
Anna Amalia ochre 08 30 gsm
Anna Amalia ochre 09 30 gsm
Ruscombe light bronze
100% Cotton Blotters 30 pt & 100 pt

ADHESIVES:
Methyl Cellulose
Klucel G (hydroxypropylcellulose)

OTHER:
Hollytex
Methylated Spirits
Golden Liquid Acrylic Burnt Umber Light
Tekwipe
Sennilier Pastels 104-107

EQUIPMENT:
Variable Speed Control Conservac with assorted micro-tools:
Conservation By Design EQGSUK0555
Vacuum Pump Chamber Machine:
Conservation By Design EQSVMS0163