

## **Preservation and Conservation of Palm Leaf Manuscripts**

**Collected from Mingin District, Sagaing Region**



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## ABSTRACT

The holdings of libraries, museums, archives, and other documentation centres are the priceless heritage of mankind. Not only in the context ancient lore but also in the context of medieval and modern age, manuscripts are considered as the most important source of authenticity. The manuscripts constitute the most precious national and cultural heritage. Thus preservation and conservation of manuscripts is a serious issue for librarians, archivist and scholars. As the National library of Myanmar is the ‘National Centre for the Preservation and Conservation of Ancient Manuscripts’, she has been very proud of taking the responsibilities of housing, collecting, taking inventory, preserving and conserving of Myanmar traditional manuscripts as the national literary heritage of the country for many years. In this paper an attempt has been made to summarize the collecting of palm leaf manuscripts in Sagaing Region, Upper Myanmar.

## **Introduction**

Palm leaf manuscripts are one of the earliest forms of written media that bears a prominent place among the historical sources on Myanmar national cultural heritage. Until the advent of the printed papers, Palm leaf manuscripts served primary function on the Buddhist doctrine and canonical literature. Preservation of information was also considered important within the Buddhist tradition as Buddhist monks were concerned in preservation of teachings of Buddha from mouth to year tradition. Accordingly, under the patronage of kings and the guidance of Buddhist monk's information that in form of Buddhist scriptures passed orally from generation to generation were documented, in the 1st century B.C. This decisive step of preservation of teachings of Buddha in palm leaf manuscripts would have been taken not only due to the difficulty in protecting the authenticity of the orally transmitted Buddhist knowledge.

Unfortunately life span of palm leaf manuscripts are rather shorter and vulnerable to natural and manmade disasters when compared to the other media chosen for preservation of information. Therefore, the available manuscripts are barely older than two or three centuries. A search through of palm leaf collections in Myanmar reveal that these manuscripts not only played a major role in preservation of Buddhist scriptures and classical literature but also took part significant responsibility in carrying forward a tradition that significantly influenced to preserve Myanmar traditional knowledge.

The present paper aims to explore modes of providing access and measures of preservation of Palm-leaf manuscripts carried out in National Library of Myanmar in the light of both traditional preservation and modern digital technological environments.

## **Nature of Palm leaf Manuscripts**

Palm-leaf manuscripts are produced from two main types of palms: palmyra, and talipot. The palmyra leaf is rather thick and inflexible, inclined towards brittleness over time. The talipot is thinner and more flexible, with excellent lasting qualities, reportedly for as long as 600 years. Although there is often some variation in size in different areas, palm-leaf manuscripts seem to average 48 centimetres in length and 4 centimetres in width. There is a considerable range of "book" thicknesses. Each "book" or bundle of leaves is usually fastened together with braided cords threaded through two holes pierced through the entire body of the manuscripts about 4 centimetres from each end or by the insertion of bamboo splints. The resultant "binding" is finished by the addition of heavy wooden covers at the front and the back, also tied by the braided cords or wrapped with webbing. There are generally two techniques used for writing on the manuscripts: through incisions with a pointed stylus, and by writing directly with a pen or brush. Most of the manuscripts that encountered in Myanmar have been incised, with occasional additions or emendations written by pen on the surface. Incised writing is made visible by the application of a mixture of lampblack and oil,

although sometimes other materials have been used, notably mixtures of bean plant juice, turmeric, and oil.

### **Types of Palm leaf Manuscripts**

Types of palm leaf manuscripts are divided into FIVE main categories based on the decoration on it. They are-

- (1) Gilded manuscript on all edges (*Shwemyinpe*)
- (2) Gilded manuscript with red pigment in the middle (*kyan zit pe*)
- (3) Decorated manuscript with red pigment (*myinnipe*)
- (4) Coated with black resin on edges (*Myin netpe*)
- (5) Undecorated Manuscripts (*Pegyan* or *MyinPhyupe*)

### **Why do National Library need to preserve and conserve palm leafs**

As the National library of Myanmar is the ‘National Centre for the Preservation and Conservation of Ancient Manuscripts’, she is responsible for creating, storing, preserving and digitizing manuscripts including palm leaf manuscripts. Actually, the palm leaf manuscripts are valuable heritage, recording history, knowledge and wisdom of ancestors. These manuscripts are archaic records with present development of the country, local community structure, tradition, belief, politics, economics, traditional medicine, arts, etc. Significantly, most of the contents of palm leaf manuscripts are Buddhist stories.

### **The earliest manuscript found in Myanmar**

The earliest manuscript found in Myanmar was in the 5<sup>th</sup> Century at Khin Ba Mound, Thayekhittaya. It is one inscribed with excerpts from the Vinaya and Abhidhamma (two of the three parts of the Pali Tipitaka) by PYU scripts on 20 gold leaves, 16.5 cm in length and 4 cm in width. It had two gold covers bound together by a thick gold wire and its ends were fastened to the covers by sealing and small glass beads. Each leaf and cover had two holes through with the gold wire passed. This is stylistically related to two important manuscript types, palm leaf manuscripts and kammavaca.



Khin Ba Mound Manuscript found at Thayekhittaya

### **Condition concerns**

Damage and deterioration to palm-leaves are usually the result of insect damage, staining, splitting, and cleavage (i.e. separation of the upper from the lower surface), and mechanical damage. Palm leaf is susceptible to desiccation, losing its flexibility and becoming brittle. In

many cases this dryness is treated by reapplying oil, which has a darkening effect if done too often. The lignified cells are particularly susceptible to degradation and discoloration. When exposed to high humidity or severely damaged by mould, palm leaves may stick together in blocks. The leaf tends to split along longitudinal veins, especially where previously incised with a stylus. Once begun, the mechanical damage progresses through the leaf.

Damage is also caused by friction between the cord and the edge of the binding hole. Some of the mechanical damage is caused by a traditional binding method that incorporates the threaded cord in a winding system around the edges of the manuscript causing breakage to leaf edges. Although leaves have been damaged by fungus, palm leaves seem to be fairly resistant, and are certainly much less subject to this form of damage than is paper.

#### **National Centre for the Preservation and Conservation of Ancient Manuscripts**

The National Library at the capital city of Myanmar, Nay Pyi Taw, was officially opened to the public in 2013. Since then, the mission of the library has changed from “To be the Depository Centre of Myanmar Literary Heritage” to “To be the Depository and Accessible Centre of the Literary Heritage of the Country”. Since that time, she has been trying to collect the traditional manuscripts and making them preserving and conservation as first priority and then making the text accessible to the public.



National Library of Myanmar at Capital City, Nay Pyi Taw

<b>Sr.</b>	<b>Sources</b>	<b>Bundle</b>	<b>Received Date</b>
1.	Pakokku Township, Magway Region	53	2 <sup>nd</sup> April, 2013
2.	National Library , Yangon Region	4037	3 <sup>rd</sup> September, 2014
3.	NyaungShwe Township, Shan State	44	September, 2014
4.	Pyinmana Township, Madalay Region	7	15 <sup>th</sup> October, 2014
5.	Pha An, Capital of Karen State	195	5 <sup>th</sup> May, 2015

6.	Mingin Township, Sagaing Region	78	27 <sup>th</sup> May, 2015
7.	Bagayar Monastery, Mandalay Region`	269	7 <sup>th</sup> December, 2016

Manuscripts Collection of National Library (Nay Pyi Taw)



Palm Leaf Manuscripts Storage Area

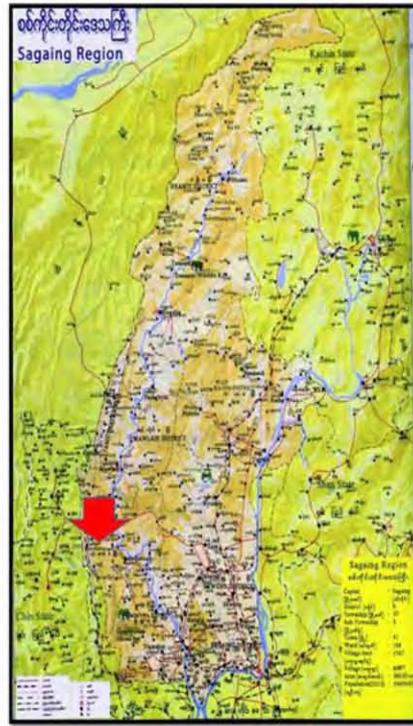
This unique manuscript collection not only unfold the development of literary and linguistic trends but also record and store early written knowledge of local wisdom related to Buddhism, History and Traditions, Arts, Indigenous Medicine, Astrology, Magic and charms, Laws, Agriculture and Trade etc. The collection is being profoundly used by both foreign and local readers because it provides scholars with primary sources for research and is of great assistance in study of religious, cultural and social profiles of ancient and mediaeval Myanmar.

#### **Preservation and Conservation of Palm Leaf Manuscripts Collected from Mingin Township**

Mingin is a township on the southern side of the Chindwin River in Kale District, Sagaing Region.



Sagaing Region



Mingin Township, Sagaing Region

Sr.	Monastery	Bundle
1.	Damarakita Monastery, Kyauk Ooh Village	15
2.	Wimottiratha Monastery	32
3.	Tumara Monastery	25
4.	Sarsanagonyi Monastery	1
5.	PyiKanSayardaw	5
	<b>TOTAL</b>	<b>78/ 117 Kyan (Title)</b>

Palm Leaf Manuscripts donated by Mingin Township

Sr.	Subject	Title
1.	<b>Moral Code (Rules of Conduct)</b>	<b>3</b>
2.	<b>Written Homily</b>	<b>3</b>
3.	<b>Zartaka</b>	<b>6</b>
4.	<b>Dammathat (Code of Laws)</b>	<b>2</b>

5.	Note	1
6.	Suttan	51
7.	Vinaya	21
8.	Abidama	21
9.	General	15

#### Mingin Palm leaf by Subjects' Analysis

Amongst the palm leaf received from Mingin Township, the earliest one was written in Myanmar year 1039 (AD 1677), which was named as 'UPAA LI PHYAT HTON' and written about judgement and the type is Myinphyu pay (Pay gyan).

#### Preservation and Conservation Section of NLM

It was first established in 1995 as the book binding section in National Library (Now the National Library-Yangon Divisional Library), and it has been as the same section for many years lack of preservation and conservation works. But in 2013, the National Library was officially opened in Nay Pyi Taw, the capital city of the country, for the public. Since that time, the preservation and conservation section has been established with the needs of preservation and conservation of library materials which are slightly damaged by the transporting the collection from Yangon to Nay Pyi Taw. Formerly, paper based materials were emphasized and then extend to palm leaf and parabaik (folded paper) manuscripts.



Cleaning the Bundle



Cleaning with soft cotton



Repairing Damaged Pieces



Placing the Bamboo Sticks



Applying Lemon Glass Oil



Drying under Opened Air



Labeling



Data Mining



Packing



Label with Accession No. and Title



Shelving



On Shelf

### **Digital Imaging as one of the Preservation and Conservation methods**

The traditional preservation method constitute of all form of direct actions aimed at the life expectancy of undamaged or damaged elements of manuscript like mechanical cleaning solvent cleaning etc .Machine made paper made of wood pulp containing harmful acidic ingredients that caused deterioration was used. Preservation ensures that people present and future will have access to the information that constitutes the documentary heritage.

In terms of preservation, digital conversion can certainly extend the life of a particular artifact. The use of original can be restricted and a high quality surrogate can be provided. Digitization enhances access to the artifact. as its image can be seen on the web by users all over the world. In addition to this it can be sent for offline viewing using a higher resolution uncompressed master file. The followings are the main considerations for digitization of palm leaf manuscripts at the National Library of Myanmar.

- (1) To increase access: this is the most obvious and primary reason, where there is thought to be a high demand from users and the library or source has the desire to improve access to a specific collection.
- (2) To improve services to an expanding user's group by providing enhanced access to the institution's resources with respect to education, long life learning.

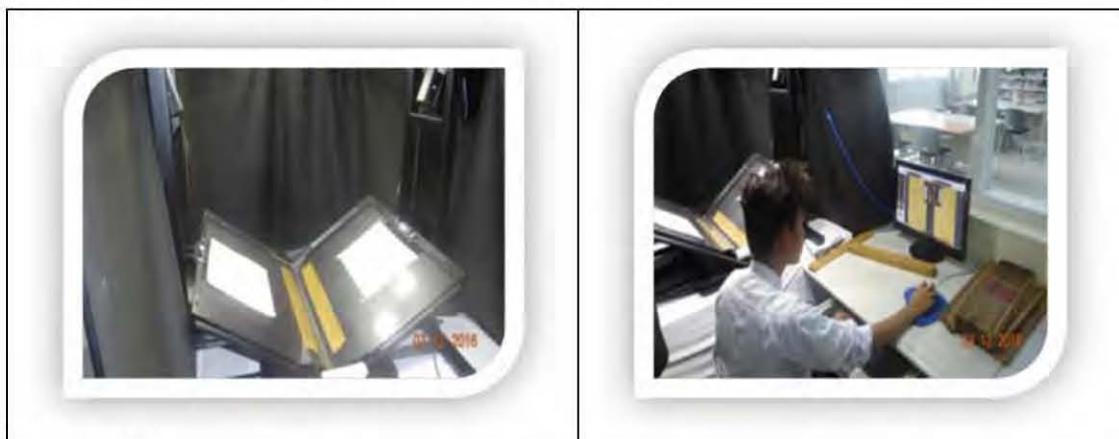
- (3) To reduce the handling and use of fragile or heavily used original material and create a ‘back up’ copy for endangered material.

► Digitization as a means of preservation of manuscripts

The digitization project done by National Library of Myanmar cannot be perform all of the library materials at the beginning because of the lack of machines, techniques and budget. But for the first phase, we concentrate on the following factors for priority on digitization. They are content, demand and condition of the manuscripts.

- (1) Content - Regardless of the purpose for implementing a digitization project, the selection of source material will always be more or less content driven,
- (2) Demand - The level of demand is of course of great interest when selecting source material for digitization. Involving scholars and other researchers in the original decision is therefore a traditional selection methodology,
- (3) Selection of materials for digitization will be affected both by its physical condition and by the exciting quality. Material, which is fragile, damaged and in poor condition may present too many risks of further damage being caused by handling to allow it to be scanned without special care, or some basic conservation techniques.

According to this criteria, the palm leaf manuscripts with the subject of traditional medicine, astrology, history and culture become the first chosen materials. Then move to other manuscripts such as palm leaf written buddhist history, parabaik and kamawa. And then to rare, ancient and unique publications of the country.



### Constraints

- (a) **Funding** - Funding is especially crucial for preservation. Traditional library units such as technical services and public services, as well as newer units such as computer systems, generally have their funding secured because they are regarded as essential to the acquisition and organization of library materials. Preservation has only recently been recognized as a separate library function, and library funds are usually too scarce to allow redistribution of funding from established operational units. Thus preservation professionals must carve out support for their programs from the scant funding allocated to other library functions, from new funding within the institution, and from external sources.

- (b) **Public Relations** - Public relations for preservation is largely concerned with reinforcing the positive image that a library or archive wishes to project about itself and its services. A positive image is projected when employees actively seek out opportunities and exploit them. A well developed, dynamic public relations program is not only in the best interests of the institution, but is paramount to the success of its preservation unit. Without such a program, the institution and its preservation program will remain invisible to the outside community and languish for lack of funds.
- The main purpose of a public relations program is to positively influence the way the public, including consumers, media, academia, and government, views an institution's preservation activities. If conducted successfully, a well-run public relations program benefits both the preservation unit and the public.
- (c) **Building Capacity** - Since preservation programs are driven by a variety of mechanisms, staff need to be trained and educated. This part discusses a number of issues relating to training and education. It also suggests that some effort be made to share the preservation load by seeking to collaborate with other institutions in developing programs.

## **Conclusion**

With recognition of importance and benefit of the old manuscripts , several institutions in Myanmar both in private and public sectors comprising local level, national level that are responsible for preservation of the manuscripts and dissemination of knowledge recorded on the manuscripts, realize a problem that possibly occurs and influences on the original manuscripts.

Authought there are many barriers to be overcome all of the manuscripts houses at the National Library of Myanmar have to be preserved in the digital form both knowledge, accessible and the manuscripts themselves for long term use throughout its lifecycle, for the purpose of education, preservation and research for future generations.