

## The Process of Conservation and Documentation at the National Museum (Naypyitaw)

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### 1 Introduction

The National Museum (Naypyitaw) is situated near the ‘Kumudra Lotus Flower’ water-fountain circle, Yazahtarni road, Zabu Thiri township in Naypyitaw. It has been under construction since June 3, 2010. The total area of the plot is 35.52 acres (figure 1).

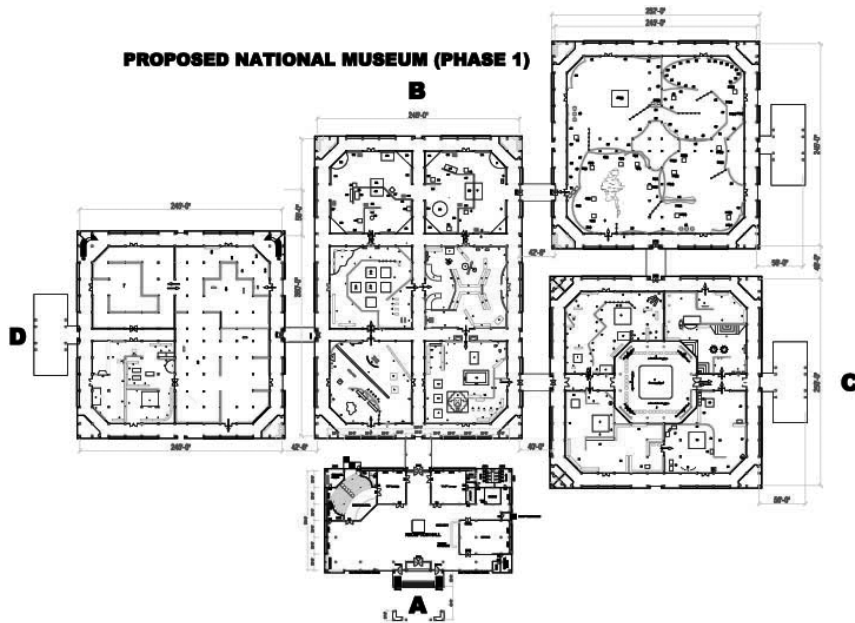
The National Museum (Naypyitaw) consists of five buildings (figure 2) with a total floor area of 298,865 square feet. Our exhibition policy is as follows: 1. To reveal the national prestige and integrity 2. To reveal our national cultural heritage



Figure 1 Total area of National Museum (Naypyitaw).



Figure 2 National Museum (Naypyitaw).



**Figure 3** Floor plan of National Museum (Naypyitaw).

that is rich and of a high standard 3. To show the soft power and ability of our nation 4. To build a museum on par with our nation’s prestige and caliber 5. To construct the museum as a solid, modern and attractive building with the correct preservation techniques and high standards. It is according to this Policy that the National Museum (Naypyitaw) is being constructed. There are 12 exhibition rooms (figure 3) in the National Museum (Naypyitaw) as follows: 1. “Primate and Natural History” exhibition room; 2. “Stone Age, Bronze Age and Iron Age” exhibition room; 3. “Pyu period (1st-9th century AD)” exhibition room; 4. “Bagan period (11th -13th century AD)” exhibition room; 5. “Pinya period, Innwa period, Hamthawaddy period and Mrauk-U period (14th -17th century AD)” exhibition room; 6. “Konbaung and Yadanapon period (18th-19th century AD)” exhibition room; 7. The “Lion Throne” exhibition room; 8. “Colonial period (1885-1948) and the period after gaining Independence (1948-1988)” exhibition room; 9. “Great Endeavors of the Government and Our Leaders” exhibition room; 10. “Union of Myanmar Nationalities’ Culture” exhibition room; 11. “Art Galleries”; 12. “Performing Arts” exhibition room.

In fact, Myanmar has a long cultural history and many cultural heritage assets, both tangible and intangible. The National Museum (Naypyitaw) is trying to reflect this precious Myanmar cultural heritage and is planning to collect and display the objects as the best and most interesting museum in the world. Hence, it is also important to perform conservation and documentation processes for the display objects.

## 2 Collection

The National Museum (Naypyitaw) is collecting the display objects for the 12 exhibition rooms.

Exhibition room No.1 “The Primate and Natural History” exhibition room will display the primate fossils found in Myanmar as its masterpiece. Scholars claim that the Pondaung Primates date back 40 million years that is 3 to 7 million years earlier than those found from Fayun that can be dated at 33 million years. It has been pointed out that Myanmar is the cradle of human origins, which is a source of pride for the country. In the exhibition room, the fossils of animals, feces, plants and leaves, as well as the minerals and the models of the evolution of man will also be displayed.

In the “Stone Age, Bronze Age and Iron Age” exhibition room, Exhibition room No.2, the Bronze Age excavated site will be displayed as the center piece. That Bronze Age site will be transferred to the museum and recreated in a life-sized model. The site will be covered over with laminated glass to allow visitors to view the site while walking on the glass. The stone implements (5,000,000-4000BP), bronze implements (4000-3000BP) and iron implements (3000BP) found in Myanmar will also be displayed. Moreover, a model of the Badalin cave that contains Stone Age mural paintings will be made including models of Stone Age men drawing the mural paintings, making the fire and making the stone implements.

Exhibition room No.3 “Pyu period” exhibition room consists of information about Pyu civilization that flourished between the 1st - 9th century AD. Here, the miniature models of buildings, ornaments, Buddha statues, the status symbols of Brahmanism, burial urns, household utensils made of iron, bronze and terracotta, and coins of the Pyu period will be displayed.

Exhibition room No.4 is the “Bagan period” exhibition room. Bagan is famous as a Myanmar cultural heritage region that is situated in the central part of Myanmar. The Bagan period flourished from the 11th to 13th century AD. Buddhist architecture, arts and crafts of the Bagan period will also be displayed. A miniature model of King Anawrahta’s palace, the first founder of the Myanmar kingdom will be showcased as well.

The “Pinya, Innwa, Hamthawaddy and Mrauk-U period” exhibition room will be displayed as Exhibition room No.5, following the “Bagan period” exhibition room. The culture of the Myanmar historic period commenced in the Bagan period (11th century AD) and successively developed to the Pinya, Innwa, Hamthawaddy, Mrauk- U period (14th-17th century AD). In this exhibition room, a miniature model of the palace of King Bayintnaung who was the founder of the Second Myanmar Dynasty in 1566 AD will be displayed. Rare antiquities such as ornaments, utensils and others accessories of these periods will also be displayed.

The “Konbaung- Yadanapon period” exhibition room, Exhibition room No. 6

will display items and information about the Third Myanmar Dynasty founded by King Alaungphaya and also a miniature model of Yadanapon palace built by the second last king, King Mindon. The Konbaung- Yadanapon is the last dynasty of Myanmar (1752-1885 AD). The costumes, utensils, ornaments and documents of these periods will be exhibited in this exhibition room.

In Exhibition room No.7, The “Lion Throne” exhibition room, a replica of the royal lion throne will be displayed together with the royal regalia.

Exhibition room No. 8, “Colonial period (1885-1948) and the period after gaining Independence (1948-1988)” exhibition room can be studied after the “Konbaung-Yadanapon period” exhibition room. Due to annexation by the British government, Myanmar used to be a colony. In Exhibition room No.8 the evidence of attempting to gain independence during the colonial period and documents of the period after gaining Independence (1948-1988) will be displayed.

Exhibition room No. 9 is “Great Endeavors of the Government and Our Leaders” exhibition room. In this room, miniature models of the dams, bridges, and roads will be displayed and the development program of the education sector, health sector, social sector, cultural sector, economic sector, human resource development sector, religious sector and other sectors will be displayed using models, photos, diagrams, graphs and other supporting materials.

As the Union of the Republic of Myanmar has various nationalities, they live happily and peacefully together in one country. Thus the National Museum (Naypyitaw) has a detailed plan to display information and materials about nationalities in Exhibition room No.10. The display will comprise their lifestyle, tradition, culture, religion, literature and habits. Thus the traditional instruments, implements, ornaments and clothes of the different nationalities will be showcased. Moreover, their tradition and festivals will be displayed using miniature models and figures.

In the “Art Galleries”, we will present the work of famous Myanmar painters such as U Ngwe Gaing, U Ba Kyi, U Ba Yin Lay and so on. The National Museum (Naypyitaw) has created Exhibition Room No. 11 specifically to showcase the paintings of these well known painters. Moreover, the history of Myanmar paintings and the mural paintings of the successive periods, that is, Stone Age paintings, paintings from the 11th century AD to 19th century AD will also be displayed. The very rare cloth painting of the 11th century AD found in a Bagan temple will be the masterpiece of the “Art Galleries”.

Fine arts are important criteria for a country. Every country has their own individual fine arts and it is necessary to maintain them in order to preserve them and allow them to be showcased as precious objects. The performing arts are one of the important factors in fine arts. The National Museum (Naypyitaw) has thus planned to exhibit “Performing Arts” exhibition room in Exhibition room No.12. In



Figure 4 Collection.

this room, traditional instruments of various nationalities will be exhibited and their traditional dances will also be displayed by using miniature models and figures.

According to the exhibition rooms, there are many varieties of displayed objects made from different materials such as gold, silver, bronze, iron, stone, terracotta, glaze, porcelain, animal bones, wood, bamboo, cane, textile, paper and fiber glass (figure 4).

The National Museum (Naypyitaw) has been collecting the display objects even though it has not opened yet. There are altogether 7535 display objects collected as follows:

- (1) Stone objects - 2345
- (2) Bronze objects - 2333
- (3) Iron objects - 145
- (4) Gold objects - 35
- (5) Silver objects - 396
- (6) Terracotta objects - 1017
- (7) Glaze objects - 57
- (8) Porcelain objects - 12
- (9) Glass objects - 4
- (10) Machinery - 110
- (11) Lead objects - 25
- (12) Animal objects - 39
- (13) Wood objects - 368

- (14) Lacquer, bamboo, cane objects - 204
- (15) Textiles - 93
- (16) Paper objects - 175
- (17) Paintings - 36
- (18) Seals - 135
- (19) Replicas - 6
- Total - 7535

### 3 Documentation

When a display object arrives at the Museum, it has to be documented in the “Entry Record”. This includes its identification type such as whether it is a gift or purchase or loan or transfer, and the signatures, name, and address of the depositors are also included.

And then, it is necessary to assign each object an accession number. At present, a tripartite or trinomial system is used. In this system, the first number is usually the year the accession was made. The second number is the lot number which is designated by the types of materials. The third number is the object number accessioned to a particular lot. For example- If a bronze object is accessioned in 2013 and its serial number in a lot is 100, the accession number is- 2013, 2, 100.

Examples of lot numbers for the materials are as follows:

Material	Lot No.
(1) Stone	1
(2) Bronze	2
(3) Iron	3
(4) Gold	4
(5) Silver	5

After that, measurements and weight are taken, photographs are taken and then index cards are completed and tied to the objects. The numbers are then entered in the registration record (figure 5) and the museum objects database (figure 6).

When the display objects are placed, a location and movement record is necessary. Whenever an object is moved, this movement is documented so it is easy to find.

When any object is borrowed or lent, loan records, both incoming and outgoing, are recorded. Although the National Museum (Naypyitaw) has not opened yet, the collected display objects have been lent to foreign museums such as the Quaxi Museum for Nationalities, China. Moreover, it has further plans to lend materials to the Metropolitan Museum of Art in New York and the Asia Society in Washington, the United States of America.

စာရင်းအင်း သည့်ခန်း	ပြတိုက် မှတ်ပုံတင် အမှတ်	ယခင် မှတ်ပုံ တင် အမှတ်	ပစ္စည်းအမည်	အရေ အတွက်	အတိုင်းအတာ(စင်တီမီတာ)				သက်တမ်း / ကာလ	ပစ္စည်း၏ မူလခေ ရာ	ပစ္စည်းလက်ခံ ရရှိပုံ	ပစ္စည်း အခြေ အနေ	မှတ် ချက်	စာတံပုံ
					အလျား	အနံ	အမြင့်	အလေးချိန်						
၂. ဝ. ၂၀၁၂	၂၀၀၀/၄/ ၂၄		ရွှေလက်စွပ်	၀	-	-	-	၆. ၃၀ ဝရမ် (၂၁)ကာရက်	ရတနာပုံ ခေတ်	ဒေါ်ခင်စု မွှေလေး တိုင်းခေသကြီး ခရမ်း ပြို့နယ်၊ စိပ်ယင်မြို့နှင့် ဆိုင်ပြင်ရွာကြား ရှိ ထောက်တန်းရွာ မှ လှူဒါန်းခံရသော ပစ္စည်း	၄. ၃. ၂၀၀၁ ခေတ်/ပြ/စာ(စ် စင်ကိုင်း ရွာနဲ့)၌ ဆွဲချိန်ပြီး ခေပစ္စည်းငွာ နဲ့ (ခေပြည်တော် )မှ လွှဲပြောင်းခံ ပို့သည်။	-	P-3	

Figure 5 Registration record.

အစိုးရသက်တမ်း(ခေပြည်တော်)၂၀၁၂မှတ်ပုံတင်ကတ်ပြား									
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Figure 6 Database.

### 4 Conservation

The most important step in the conservation process is to document the existing condition of the object. Documentation is performed for every object that has been brought into the conservation laboratory prior to having any treatment. In this document, the physical condition such as any cracks, disfigurement to the object, any sign of damage or wear, addition and losses, previous restoration, color change, insect damage and bio deterioration are mentioned. And then the method of treatment is documented to allow the conservators to monitor and assess the effectiveness of the treatment in the future. Moreover, reconstruction and restoration



works are also completely documented and administrative details recorded. When the treatment is completed, the condition of the object is documented again for comparison with its pre-treatment condition. The National Museum (Naypyitaw) is using both textual documentation and visual documentation. For textual documentation, the check list style of documentation is used and digital photos are used for visual documentation. Both are then installed in a computer database.

A major objective of all conservation treatment is to increase the chemical stability of the object being treated. Cleaning often forms an important part of the stabilizing process. This is because dirt on an object can be a potent source of deterioration (as for example, when chloride salts set off corrosion reactions on bronze, or moulds grow on organic materials like paper or textiles). At other times, cleaning may be a necessary preliminary to a further treatment. Therefore, cleaning the dirt is the main conservation work at the National Museum (Naypyitaw). "Dirt" can be classified into two types:

- (1) Foreign matter that is not part of the original object. (examples: soot, grease, stains, adhesives and fillings from previous treatment).
- (2) Products of alteration of the original materials. (examples: metal corrosion products, decayed timber or stone).

Dust (foreign matter) is commonly an amazing mixture of fragments of human skin, textile fibers, carbon particles (soot) and grease from unburned hydrocarbon fuels, from cooking and from the skin of people and animals. There are many salts in dust, for example, sodium chloride and sharp gritty silica crystals are often present. This chemical mixture contains the spores of countless moulds and fungi and micro-organisms are equally likely to attack objects made of organic material. Much of this dirt is hygroscopic (water-attracting) and this tendency can encourage the growth of moulds and increase the corrosiveness of salts. So even dust is damaging although perhaps only slowly.

If the dust is a product of the alteration of part of an object, some of the object itself will be erased when removing the dust. For instance, when the tarnish on a silver object is cleaned away, not only the sulfur atoms that are foreign matter, but also some silver atoms originally positioned by the silversmith are removed.

Conservation has to be performed according to object type. The object types can be classified as (1) Metal objects, (2) Organic objects, and (3) Inorganic objects.

(1) Metal objects include bronze, gold, silver, iron and lead.(figure 7)

For bronze objects, both physical and chemical cleaning methods are used. In the physical method, the corrosion products are removed using simple mechanical tools such as pin, scalpel, chisel, hammer, and motor drive vibrator. And then the final rub is performed using fine emery paper to bring out the inner patina. The chemical cleaning method involves the bronze object being immersed in 5% of citric acid (60-80°C) and washed with distilled water and then dried.

The gold objects are soaked in 2% caustic soda solution to remove the organic residue. Normally, corrosion does not take place on gold objects and they can be cleaned using distilled water.

The silver objects are cleaned by immersing in 10% formic acid for an hour and washed with distilled water and dried.

The incrustation of lead objects can be cleaned using 10% acetic acid by brushing.

For iron objects, the rusting can be eliminated by boiling repeatedly in 10% caustic soda for three weeks. Lumps of lime incrustations can be removed by dilute nitric acid before treatment with caustic soda.

Metal objects are kept in a dry environment.

(2) Organic objects include wood, palm leaf, paper, bamboo, lacquer ware, textile, bone and ivory, feather and leather.

Wooden objects are easily affected by insects. Insect-infested wooden objects should be fumigated in the laboratory but this cannot be done in the National Museum (Naypyitaw) because it lacks a fumigation chamber. Thus only the cleaning process can be done using rectified alcohol.

For the palm leaf manuscripts, the dust on the leaves is cleaned by brushing, cleaned by rectified alcohol and then applied with 5% lemon grass oil in rectified alcohol.

Paper objects can be decayed by moisture, dust, insects, faulty storage and etc. Paper objects should be kept in 60% RH. If not, the moisture and acidity will be absorbed by the paper leading to decay. In the storage room of the National Museum (Naypyitaw), RH is adjusted to about 60%.

Bone and ivory are cleaned using rectified alcohol. Feather and leather are kept under the condition of 60% RH and 20°C.

(3) Inorganic objects (figure 8)



Figure 7 Metal objects (from left to right: gold object, silver object, bronze object, and iron object).



**Figure 8** Inorganic objects (from left to right: stone object, and terracotta).

Inorganic objects such as clay and stone objects can be cleaned by brushing first. For kiln-fired clay objects, to clean them, they can be soaked with water repeatedly. Oil, wax or paint stains on the stone objects can be cleaned using acetone and 5% ammonium hydroxide solution to remove the algae.

The collected display objects in the National Museum (Naypyitaw) are simply cleaned and consolidants and coating are rarely applied to prevent disturbance of the aesthetic beauty of the object.

## 5 Conclusion

Although the National Museum (Naypyitaw) is still under construction, collection of display objects continues. Some of these are excavated from ancient sites and some are collected by donating, exchanging and awarding. Each and every display object that arrives at the National Museum (Naypyitaw) is systematically documented. Such display objects have to be preserved and conserved in a fully-equipped conservation laboratories. However, the display objects are being conserved using simple chemicals and ordinary equipment. Therefore, the National Museum (Naypyitaw) has been engaged in two major tasks, that is, conservation and documentation which it has undertaken with all its heart and soul.

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