

Textile Conservation in South East Asia: Weaving Together East and West

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Established in 2012, the Queen Sirikit Museum of Textiles (QSMT) conservation laboratory is Thailand's first and foremost textile conservation lab. QSMT's overarching mission – to preserve and nurture Thailand's rich textile culture – is amplified by its commitment to incorporate traditional, sustainable methods in the conservation lab. This approach brings together the highest available international standards for protecting collections with local, sustainable products and techniques. The resulting patchwork of conservation practices is specific to Thailand; it both honors and protects the country's unique textile heritage. (Figure 1)

From the outset, the QSMT conservation lab has adopted a purposeful blend of western-based conservation practices and traditional Thai techniques and knowledge. Furthermore, the QSMT is beginning to explore innovative, non-Western museum and collection management models that reflect indigenous values and are culturally appropriate. This is in keeping with the evolving conservation culture in South East Asia, in which the QSMT plays a leadership role. This paper will outline the key strategies guiding the hybrid culture of conservation and museology that is emerging at the QSMT, and throughout Asia.

The QSMT lab's core conservation model is grounded in western scientific approaches, materials and theories. While setting up the lab, the majority of its supplies were imported from the USA or Europe in order to comply with international conservation standards. Conservation trainees gained familiarity with these materials and proficiency in their uses, which **aligned the staff's competencies with internationally recognized best practices.** (Figure 2)

Building upon this foundation, the QSMT conservators began to **study and document a wide range of traditional indigenous techniques used for dyeing, cleaning and insect mitigation, as well as time-tested methods for passive climate control.** Through applied research and analysis, many of these historical textile preservation practices are being adapted and incorporated into the conservation lab's methods and theoretical approach.

The next step was to **develop locally produced materials to supplement and in some cases, replace the imported conservation supplies.** The QSMT took the initiative to partner with SCG (Siam Cement Group) corporation to research and develop a fully PAT¹ tested acid-free corrugated board for conservation profession. Now it is exclusively used both at the QSMT and several institutions in Bangkok. It is the only board of its

¹ Photographic Activity test (Per ISO 18916)

kind produced in Asia, and illustrates the self-reliance, creativity and innovation that are advancing sustainable conservation in the SEA museum community.² (Figure 3)

From its' beginning, the QSMT has taken an active role in **advancing conservation science, education and museology in the region**. In 2012, the QSMT lab staff attended APTCCARN (Asia Pacific Twentieth Century Conservation Art Research Network), which focused on the challenges of preservation in hot humid climates. APTCCARN brings together South East Asian heritage professionals to discuss solutions and local collaborations in preserving organic materials in constantly high Rh environments, including temples, small rural historical sites, and larger museums and archives.(QSMT is an organizer of the next meeting in Taiwan, 2015.)³ (Figure 4)

To mark the Auspicious Occasion of Her Majesty the Queen's 80th Birthday Anniversary in August 2012, the QSMT curators and conservators began to research the history of care of court textiles. Primary sources for research included old palace records, information from the 19th century royal textile trade, photographs, oral histories and interviews with two elderly women, trained in court techniques of perfuming, cleaning and care, provided a rare window into obsolete practices, such as washing and ironing, glazing, pleating and perfuming. Care of textiles in the Thai court revealed an extraordinary record of exotic plant materials and methods, evidence of extensive trade, and an obsession with beauty.

An interactive educational exhibition on court textile care was held at QSMT by using historic objects supplemented with special programs and lectures. *Pressing, Perfuming, and Preserving: Caring for Textiles in the Inner Court* explains and illustrates traditional methods of treating fine clothes. In addition to archival photos, samples of materials, explanations, processes, and tools, visitors were encouraged to smell, touch, and sample the materials for themselves. A sampling of some of the ancient procedures highlighted the delicacy of the processes. Several cleaning methods were described, including the following. Large silk brocade or painted cotton hip wrappers were commonly washed individually and scented with fragrant smoke from Madagascar jasmine. Sticks or small paddles were used to agitate the textile and loosen the dirt. Fenugreek seeds were also added to the water, as a natural *saponin* for cleaning and a gel for sizing. Fenugreek's mucilage coating created a glossy finish, which was buffed with cowrie shells, agate, glass bottles, or even small cannonballs until the textile was glazed with a shiny finish, a feature highly prized by the court. Typically, the more delicate breast wrappers and shoulder cloths received only gentle soaking in clean water. Fragile gold brocade, gold

² Conservation corrugated blue board is available from QSMT. For inquiries or orders, please contact : shop@qsmthailand.org

³ The Asia Pacific Twentieth Century Conservation Art Research Network (APTCCARN) is a collaborative effort to explore the history and preservation of twentieth-century cultural material in Asia and the Pacific. These relatively recent works of art are important in terms of national identity and memory, yet research on their preservation has not been a major focus of research in our region. APTCCARN comprises of a group of researchers whose work focuses on art produced during the twentieth century in the Asia-Pacific region. This research is informed by art historical research, art curatorial practice and conservation, scientific inquiry, and collaboration.

net and gold-embroidered textiles were worn as hip and breast wrappers or sashes were spread flat, soaked in coconut water, rinsed in clean water, and dried. The show was popular with old and young alike – school children loved learning the history of old Siam through materials. (Figure 5)

Meanwhile the QSMT's conservator in collaborated with SEAMEO SPAFA (Southeast Asian Ministers of Education Organization Regional Centre for Archaeology and Fine Arts) jointly hosted "Contrasting Textile Conservation Methods for South East Asia," in November 2012. The first textile conservation workshop for 25 ASEAN museum professionals. The impetus for this workshop was the obvious need for regional training and networking among SEA textile specialists who are charged with caring for national and regional textile and ethnographic collections. This concrete forum was the start of developing a regional network for the exchange of conservation principles and practices. Julia M. Brennan, textile conservator and consultant to the QSMT was the chief facilitator of the workshop.

The workshop examined the contrast between scientific western methods of conservation and traditional methods of preservation. Geared specifically to the region and the care of textiles specifically in the hot humid Asian climate, a goal was to promote conservation decisions, which are low-cost, practical, and locally available. The workshop served as a forum to discuss mainstream 'western' solutions, as well as traditional practices that could be more sustainable. Each participant summarized the storage, cleaning, insect mitigation, and climate control methods at their institution, and brought samples of traditional materials used. Since many participants use a combination of modern chemicals and traditional herbs, conversations and breakout sessions focused on the success of marrying traditional and modern practices. Examples include the use of 'lerak' (soap nut plant extract) surfactant in Java to clean historic batiks, and development of pH neutral soda-ash free local mulberry paper in Thailand (*Kradad sah*) to substitute for imported tissues. (Figure 6)

Most importantly, the training workshop, "Contrasting Textile Conservation Methods for South East Asia", brought together an engaged group of ASEAN museum staff in a non-intimidating hands-on and theoretical workshop. The collegial atmosphere promoted exchange, exploration and debate about conservation strategies. What's more, these productive dialogues continue. The QSMT recently reached out to colleagues in Indonesia for guidance about the care of antique batik collections in Thailand.

Curators, conservators and exhibition attendees all recognized that while textiles are an integral part of Thai culture and history, the practitioners and traditional knowledge were dying out. In response to the interest generated by the court textile exhibit, QSMT launched a research project to document the methods and materials in traditional textile preservation, 'Before They are Gone: Capturing and Sharing the Traditional Methods of Textile Preservation in Thailand.' **As a national laboratory and educational center, the museum has both the opportunity and the responsibility to research and preserve Thailand's legacy and heritage of caring for textiles.** This knowledge is

central to the identity and authenticity of the upcoming generation of Thai conservators, and provides a critical historical framework for the profession in Thailand.

The ‘Before They are Gone’ project brings together scientifically trained textile conservators and Thai elders in an exchange of current and outdated textile preservation practices. (Figure 7) Data regarding methods and materials used for storage, cleaning and stain removal, mold, insect and rodent mitigation was gathered from 50 informants from rural and urban areas, as well as the royal court. (Mentioned above) In addition, researchers collected stories and anecdotes regarding customs and beliefs associated with textile care. A plant database of 30 specimens, the first in Thai conservation research, is the foundation to re create and test traditional recipes, and analyze and test the efficacy of these materials. (see, plant chart)

It is evident that most of the informants, who are weavers and dyers, bring their innate, non-schooled, wisdom of plant compounds and their characteristics, to the cleaning and care of their textiles. As weavers, textiles are a form of their expression, and hence cherished, protected and preserved. Through experience and inherited examples, as well as cooking, they are practical scientists. They may not be able to explain ‘why’, but they know how an acid or alkali will react with silk or cotton. They are profoundly in tune with the chemistry and climate; knowing whether humidity or UV can adversely or advantageously affect a certain plant material’s potency and reaction. For example, the chance of mold can increase when collecting the silkworm cocoons, so this task is not done in the morning when the dew remains on the cocoons. Similarly, mold occurs on the warps when applying starch for strengthening them, so the warps are carefully rinsed, with an alkaline solution.

While superstitions or local beliefs appear to affect the choice and timing to use certain cleaning materials; these decisions are often guided by ‘scientific’ or quantifiable physical conditions (such as humidity increases rate of mold, what trees or plants are flowering or fruit producing at certain times) These informants are intimately familiar with the plant materials, which are not only locally available, but also often used for a wide variety of purposes, such as cooking, medicinal purposes, holistic and preventative health care, and religious ceremonies. Many of the historical techniques and theories are as precise and empirical as the ‘western scientific’ methods.

The QSMT conservation researchers discovered that the methods and materials used in traditional textile preservation form an underlying structure for much present day conservation knowledge. Moreover, the traditional knowledge provides possible innovations for today’s conservators.

The ‘Before They are Gone’ research is on-going, and the continued steps in the research are three fold:

Firstly, to complete a broader literature search, identifying other South East Asian projects that are also gathering indigenous data for the purposes of enhancing conservation knowledge and cultural identity. Having a comprehensive bibliography of comparable endeavors will inform this localized Thai project, and help guide the protocol and structure for a larger SEA-wide research project.

Secondly, scientific advisors are sought to join the project in order to analyze the plant material data, identify the compounds and active ingredients, and correlate them with both commercially produced products as well as chemical products used by textile conservators today. In addition, this project seeks to promote cooperation with growers and ethno botanic specialists.⁴ (Figure 8) A plant biologist, botanist, or natural products scientist will provide the chemical analysis, and assist in identifying the plants. It is evident from the research to date that several of the plant materials contain compounds such as *saponins*, which are natural detergents, and have counterparts such as *Orvus* and other commercially produced cleaners in use today in mainstream ‘western’ textile conservation. Early data points to clear correlations between certain traditional cleaning materials (such as rice water or coconut water), and chemical characteristics of present day cleaners. The identification of plant biology and their correlation to modern chemical products is paramount to the project.

Finally, in order to accurately evaluate the physical effect of these traditional treatments, the plant materials must be collected, and the actual processes for preparation and use replicated and tested. In addition to the scientific advisor and local botanist, the participation of indigenous elders will help insure the authenticity and accuracy of these investigations. Recipes will be compared and materials collected. Since any given plant may contain different amounts of a certain chemical, depending on season, health, genus, etc., local experiments are important.

This final step in the research would confirm which traditional practices are applicable to today’s conservators. In the words of one conservator at the Queen Sirikit Museum of Textiles, “by using scientific procedures to explain these traditional methods, I hope to gain new knowledge, my own Thai knowledge, that can improve my textile conservation practice.”⁵

While there is still much to gather and analyze, the QSMT’s ‘Before They are Gone’ project is focused on producing a tested and replicable research model which can be adapted and applied in other South East Asian countries. **It clearly demonstrates that smaller local or regional projects can play an important role in creating big-data**

⁴ A recent project in Mexico led by Dr Lilian Garcia Alonso (National School of Conservation ENCRyM, Mexico City) is the model for the direct adaptation of indigenous knowledge into modern day conservation practices. Garcia Alonso and her team are testing Tzauhtli (a pulp extracted from an orchid bulb and used in ancient Meso American times), as a natural alternative to adhesives used in textile restoration.

⁵ Personal communications with Nuchada JOY, 2014

knowledge bases, as well as in developing and disseminating international conservation protocols and practices. In this capacity, QSMT conservators hope to partner with our ASEAN colleagues to expand this research and produce a searchable term database for SEA plant materials and textile preservation methods that is pan-Asian in scope.

The ‘Before They are Gone’ project is an innovative tool for capacity building in the SEA conservation community, one which combines academia, research, and advocacy. This is an organically Asian project, shaped by Thai conservators, who recognize the importance of networking with other SEA colleagues and the need to establish strong protocols and research in the field. Exchanges and publications, as well as sustained funding for collaborative projects such as ‘Before They are Gone,’ are essential to redefining Asia-based Asia-Grown conservation practices.

The QSMT research into traditional textile preservation practices was published and presented at two international forums: the 2014 International Council of Museums Triennial Conservation Congress (ICOM) in Melbourne, and the International Institute for Conservation (IIC) which was held in Hong Kong in Fall 2014. The fact that both these prestigious conferences were held in Asia/Australasia underscores the region’s importance and value to the international conservation community. Furthermore, it sends a clear signal that the museology and conservation sciences undertaken by Asian museums have tremendous growth potential.

The high quality of the QSMT presentations and standards, coupled with emphasis on the actual cultural identity and indigenous research, resonated with the audiences. We are optimistic that some of our international colleagues will partner with QSMT to expand the ongoing scientific analysis and testing phase of the project.

In addition, QSMT served as a panelist at ICOM CC 2014 in a forum on sustainability and environmental standards for cultural institutions in South East Asia. **Working within the framework of the recent revision of guidelines for environmental conditions in museums and cultural institutions,⁶ panelists addressed diverse collections in multiple countries, and local solutions to achieving best practices.** SEA colleagues proposed employing passive methods and simple technology; for example, utilizing characteristics of ‘colonial’ architecture which breathe versus the ‘western’ and ‘totally Asian modern’ un-sustainable practices of 24/7 air-conditioning. It is worth noting that discussions such as these would not have occurred as recently as ten years ago, when the dominant ‘western’ conservation models were largely unchallenged.

The conservation platform is expanding, and onto that **Asian conservation professionals can and should build their own curriculums, both local and international.** There is a rising demand for students with chemistry and scientific backgrounds who can develop conservation research and analysis protocols locally, with an emphasis on sustainability. Hong Kong conservation specialists and museum management more than thirty years ago

⁶ ICOM CC and IIC 2014 Draft Declaration on Environmental Guidelines

adopted this approach; a majority of their conservators are chemistry majors. This ensures a scientific empirical base to conservation tasks and research. The expertise of young scientists will add new perspectives into the museum and conservation fields. Asian conservators, as well as museum management, need to pursue professional commitments, support higher education platforms, and publish their findings. It is not sufficient to rely on the conferences and forums initiated by Europe and the USA. In addition, the integral and essential work of collections managers and preservation staff must be elevated in the hierarchy of museum management. These collections staffs in fact perform many of the tasks that conservators do, and double as conservators in many SEA institutions. They need education, recognition and support.

Museum directors and conservators in ASEAN countries have an unprecedented opportunity to **approach museology with a fresh eye, to re-imagine the relationships they create between the public and material culture.** Already some are moving away from the 'western colonial' model and considering holistic ways to restructure the museum-going experience. Who will be the wisest guides and what will be the clearest signposts in the redefined Asian museum of the 21st century? Perhaps a batik wax drawer is most important at a textile institution, or the storyteller of a puppet museum. Perhaps the 'museum' is actually a 'marketplace' and eating and gathering place. In its quest to educate, spark creativity and perpetuate heritage, the museum must envision a future that is authentic, exciting, and meaningful to the culture, and each visitor.⁷

In everything it does, **the QSMT seeks to integrate the very best conservation practices and protocols with traditional wisdom.** This philosophy is based on HM King Bhumibol Adulyadej's 60 year-old principles of development called the *Sufficiency Economy Philosophy*. To elaborate, it is a philosophy that stresses the middle path as the overriding principle for appropriate conduct and way of life by all people, regardless of social station or occupation. (Figure 9) This applies to individual, family, and community; it counsels moderation, self-reliance, honesty and integrity, while exercising knowledge with prudence.⁸ HM King Bhumibol, and this important contribution, were recognized by both UNDP and WFP awards in 2007.

Underlying the philosophy is the modest advice that cares and practicality "is needed in the application of theories, technical know-how, and methodologies for planning and implementation. The simplest way to follow the "sufficiency economy" philosophy is to go back to what is indigenous. And this applies not only to farmers (to whom it comes naturally) but to civil servants, business people, artists, and students."⁹

⁷ One of the most singularly re defining institutions today is Museum of the Old and New (MONA) in Hobart, Australia, which defies all established museum practices. Guards are also curators, waiters are also art installers, receptionists are conservators – everyone has multiple roles. There are NO labels, no single WAY to see the museum. "Art" appears the same as restaurant or lounge sometimes. The iPhone provided plays music to accompany each visitor. MONA demonstrates that when the vision of museum staff changes, the expectations of visitors can and will change, and the community benefits.

⁸ **Thai Airways Magazine**, 10 October, Volume 24, No. 13, 2007

⁹ **Ways of Learning Sufficiency Economy**" published by the Ministry of Agriculture and Cooperatives.

As civil professionals, the QSMT conservators embrace and apply the King's thinking into improvements and practice: to adopt the best of all global practices and research, both western and Asian; to look at our own culture and ingenuity for applicable knowledge; and finally to develop a sustainable local model that is a balance between the two. In the context of the QSMT, directors and conservators are adopting approaches that respect our collections, climate and mission. The project 'Before They are Gone' is emblematic of the newly established the QSMT, and hopes to contribute to the evolution of SEA museology. It invites colleagues to join a 'conservation movement' of sorts, use the established protocol and explore their own preservation heritage, for the purposes of expanding their knowledge and common networks in Asia.

Please see separate document for photo/image captions.



Figure 1 The Queen Sirikit Museum of Textiles building located on the grounds of the Grand Palace.



Figure 2 Overview of the QSMT conservation lab.



Figure 3 Acid free corrugated boards. Materials develop for museum grade. QSMT Project in collaborate with Siam Cement Group (SCG paper).



Figure 4 The QSMT's conservators and the SEA participants join the APTCCARN conference 2012.



Figure 5. Smell fragrant, education zone of Pressing, Perfuming, and Preserving: Caring for Textiles in the Inner Court, 2012.



Figure 6. SEA participants joined a lecture of the Mulberry paper (*Kradad sah*) from the Royal project, Chiangrai, Thailand., 2012.



Figure 7. Local weavers, informants from northeastern, Thailand.

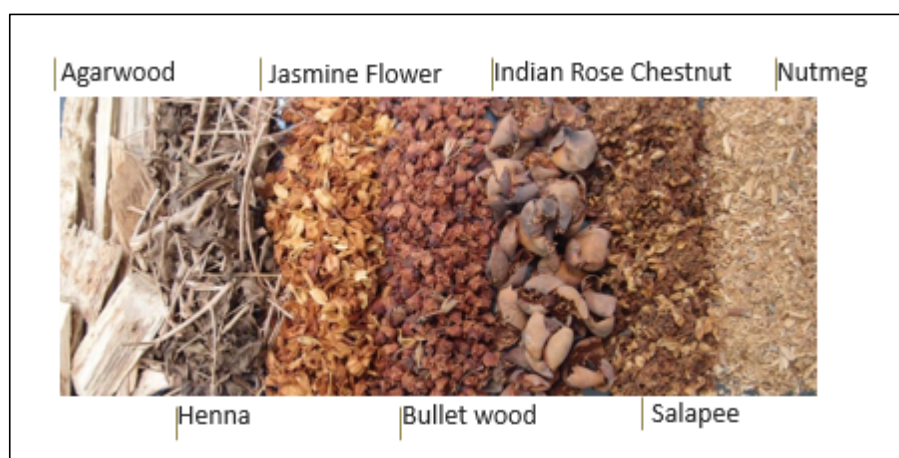


Figure 8. Seeds, Bark and herbs for perfuming – applied by essential oils distilled or extracted, or smoking, soaking of cloths



Figure 9. Their Majesties (King Bhumibol and Queen Sirikit) among
with their peoples in rural area.