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WHAT WE ARE WORKING ON NOW IS BASED ON HISTORY AND TRADITION – JAPAN'S URUSHI ART

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ABSTRACT

The movement to preserve lacquerware heritage in the Asia-Pacific region seeks to connect the countries of East Asia through lacquer art, forming a cultural continuum. Lacquer is defined as "natural paint made from tree sap". However, the lacquer trees, even if they belong to the same botanical family, differ in genus, and even within the same genus, they adapt to the environment of their growth location. It is therefore essential to understand the historical origins of lacquer art and the indigenous decorative methods developed in each country; through this understanding, lacquerware can be viewed as part of a shared cultural sphere. In modern usage, the term "lacquer" has come to refer primarily to synthetic paints. To distinguish natural lacquer from synthetic materials, the sap collected from trees in Japan and China is often referred to as urushi in both English and Japanese, a term derived from urushiol, the primary chemical component of the sap. In recent years, however, international restorers presenting at lacquerware conservation symposia have increasingly used the Japanese term urushi to refer more broadly to the main oil components of natural tree-sap lacquers, such as laccol in Vietnamese lacquer and thitsiol in Thai and Myanmar lacquer. In this article, the term URUSHI is used as a general designation for natural tree-sap lacquers. Common characteristics - including the harvesting of sap by cutting into tree trunks, the need for controlled temperature and humidity during drying, careful handling due to allergenic properties, and established systems of production – allow us to discuss the protection of a shared lacquerware heritage in the Asia-Pacific region as a unified endeavor

This article first seeks to highlight Japanese URUSHI art as a distinct tradition.. By tracing the historical development of Japanese URUSHI art, we can clarify the reasons for its uninterrupted continuity, explore its connections with neighboring URUSHI-producing regions, and examine its origins through excavated artifacts. This approach also allows for an examination of the various types of lacquerware bases, the evolution of Maki-e unique to Japan, the adoption and refinement of decorative techniques introduced from abroad, the imitation of exported Japanese lacquerware overseas, the indispensable role of URUSHI art in the Meiji government's foreign policy, and the preservation of lacquer techniques through formal education. Through this perspective, we can better understand the relationship between historical practices and contemporary URUSHI art, recognizing that what is created today is firmly grounded in history and tradition.

Keywords: Sap; URUSHI; KANSHITSU; History; Maki-e; Japanning; KINTSUGI.

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NHỮNG GÌ CHÚNG TA LÀM HIỆN NAY DỰA TRÊN LỊCH SỬ VÀ TRUYỀN THỐNG – NGHỆ THUẬT URUSHI NHẬT BẢN

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TÓM TẮT

Phong trào bảo tồn di sản sơn mài ở khu vực châu Á - Thái Bình Dương hướng đến việc kết nối các quốc gia Đông Á thông qua nghệ thuật sơn mài, tạo nên một sự liên tục về văn hóa. Sơn mài được định nghĩa là "sơn tự nhiên được làm từ nhựa cây". Tuy nhiên, các loài cây sơn mài, dù thuộc cùng một họ thực vật, vẫn khác nhau về chi, và ngay cả trong cùng một chi, chúng cũng thích nghi với môi trường nơi sinh trưởng. Do đó, việc hiểu rõ nguồn gốc lịch sử của nghệ thuật sơn mài và các phương pháp trang trí bản địa được phát triển ở mỗi quốc gia là rất cần thiết; thông qua sự hiểu biết này, sơn mài có thể được xem như một phần của phạm vi văn hóa chung. Trong cách sử dụng hiện đại, thuật ngữ "sơn mài" chủ yếu dùng để chỉ các loại sơn tổng hợp. Để phân biệt sơn mài tự nhiên với vật liệu tổng hợp, nhựa cây thu thập từ cây ở Nhật Bản và Trung Quốc thường được gọi là URUSHI trong cả tiếng Anh và tiếng Nhật, một thuật ngữ bắt nguồn từ urushiol, thành phần hóa học chính của nhưa cây. Tuy nhiên, trong những năm gần đây, các nhà phục chế quốc tế trình bày tại các hội thảo về bảo tồn đồ sơn mài ngày càng sử dụng thuật ngữ tiếng Nhật URUSHI để chỉ rộng hơn các thành phần dầu chính của sơn mài nhựa cây tự nhiên, chẳng hạn như laccol trong sơn mài Việt Nam và thitsiol trong sơn mài Thái Lan và Myanmar. Trong bài viết này, thuật ngữ URUSHI được sử dụng như một tên gọi chung cho sơn mài nhựa cây tự nhiên. Các đặc điểm chung - bao gồm việc thu hoạch nhựa bằng cách cắt vào thân cây, nhu cầu kiểm soát nhiệt độ và độ ẩm trong quá trình sấy khô, xử lý cẩn thận do đặc tính gây dị ứng và các hệ thống sản xuất đã được thiết lập – cho phép chúng ta thảo luận về việc bảo vệ di sản sơn mài chung ở khu vực châu Á - Thái Bình Dương như một nỗ lực thống nhất.

Bài viết này trước tiên nhằm mục đích làm nổi bật nghệ thuật URUSHI của Nhật Bản như một truyền thống riêng biệt. Bằng cách theo dõi sự phát triển lịch sử của nghệ thuật URUSHI Nhật Bản, chúng ta có thể làm rõ lý do cho sư không gián đoan của nó, khám phá mối liên hệ của nó với các vùng sản xuất URUSHI lân cận và kiểm tra nguồn gốc của nó thông qua các hiện vật được khai quật. Cách tiếp cận này cũng cho phép xem xét các loại chất liệu nền sơn mài khác nhau, sự phát triển của nghệ thuật Maki-e độc đáo của Nhật Bản, việc tiếp thu và hoàn thiện các kỹ thuật trang trí du nhập từ nước ngoài, việc bắt chước các sản phẩm sơn mài Nhật Bản xuất khẩu ra nước ngoài, vai trò không thể thiếu của nghệ thuật URUSHI trong chính sách đối ngoại của chính phủ Minh Trị, và việc bảo tồn các kỹ thuật sơn mài thông qua giáo dục chính quy. Thông qua góc nhìn này, chúng ta có thể hiểu rõ hơn mối quan hệ giữa các thực tiễn lịch sử và nghệ thuật URUSHI đương đại, nhân ra rằng những gì được tạo ra ngày nay đều dựa trên nền tảng lịch sử và truyền thống.

Từ khóa: Sap; URUSHI; KANSHITSU; Lịch sử; Maki–e; Nhật Bản; KINTSUGI.

1. INTRODUCTION

It is gratifying to see the movement to protect the lacquerware heritage of the Asia-Pacific region taking shape under the leadership of the International Information and Networking Centre for Intangible Cultural Heritage in the Asia-Pacific Region (ICHCAP), under the auspices of UNESCO. Exchanges among a small number of individuals at a private level can yield only fragmentary or preliminary information. By contrast, this project has the capacity to bring together practitioners from diverse regions and professional backgrounds in a shared forum. However, our mutual understanding of lacquerware cultures remains limited, Making it difficult to connect the lacquer traditions of East Asian countries into a coherent cultural continuum. If lacquer is defined as a natural paint made from tree sap, it becomes clear that, while the trees may belong to the same botanical family, they often differ by genus, and even within the same genus they adapt to the specific environments in which they grow. Because lacquer requires specific temperature and humidity conditions to dry properly, its properties have evolved in close relation to local climates. There are also regional differences in the historical origins of lacquer art. It is therefore essential to deepen our understanding of the decorative techniques indigenous to each country.

2. ABOUT URUSHI

2.1. URUSHI or LACQUER

At the beginning of this article, we refer to the lacquer obtained from the bark of Toxicodendron verticillium in Japan and China as *URUSHI*, following Japanese usage. Today, the word "lacquer" commonly refers to synthetic paints, Making the term URUSHI easier to accept, as the principal oil component of natural lacquer is called *urushiol*.

The kanji, Chinese character "漆" handed down from China was written in ancient records such as the Shosoin Document in the 8th century. While its meaning remains consistent with Chinese usage, its pronunciation in Japanese is u-ru-shi. In Japan, the character "漆" (URUSHI) has consistently referred to natural wood lacquer. In modern usage, however, even in Chinese– speaking regions, the same character has come to denote all types of paint, including materials, requiring synthetic careful attention in cross-cultural contexts

In recent years, international conservators presenting lacquerware restoration at symposia have increasingly referred to natural tree-sap lacquer as URUSHI, using the Japanese term in both speech and writing. The primary oil components of sap lacquers – *laccol* in Vietnamese lacquer and thitsiol in Thai and Myanmar lacquer – are also frequently referred to as URUSHI in Japanese contexts. In this article, regardless of whether the principal component is urushiol, laccol, or thitsiol, the general term URUSHI is used.

These shared characteristics -harvesting sap by cutting into tree trunks, the need for appropriate temperature and humidity during drying, careful handling due to allergenic established production properties, and systems – make it possible to discuss the safeguarding of lacquerware heritage in the Asia-Pacific region as a unified concern. As a starting point for this discussion, this article first focuses on Japanese URUSHI art as an individual tradition

This article examines the history of Japan's URUSHI art across historical periods, clarifying the reasons for its uninterrupted continuity and exploring its relationships with neighboring lacquer–producing cultures. Depending on the topic, the discussion moves

back and forth between past and present. This approach reflects the fact that URUSHI art remains a living tradition rather than a technique confined to the past.

2.2. Japan's URUSHI work

2.2.1. Exploring the Origins

It is well known that Japan's civilization developed later than the ancient civilizations of the continent, and that technological transmission played a significant role in its early stages. However, this does not mean that innovation did not also occur within Japan. Even when a product is transmitted, it cannot be effectively used unless the accompanying knowledge is also conveyed. The age of excavated artifacts alone does not ascertain the historical evolution involved. and it remains possible that earlier, pioneering examples have yet to be unearthed. Earlier developmental stages might have existed before the current dates acquired from the existing excavated *urushi* artifacts; however, archaeology must rely on future discoveries to trace these stages further back in time.

Α URUSHI-lacquered red comb excavated in 1975 from a 6,000-yearold stratum at the Torihama Shell Mound in Fukui Prefecture was significant for extending the known history of Japanese URUSHI art far into the past¹, The human tomb at the Kakinoshima B site in Hokkaido excavated in 2000 was measured to be 9,000 years old, and although the human bones were gone, red URUSHI ornaments survived, demonstrating the material's remarkable durability. If the dating was confirmed, the object would represent the oldest lacquer artifact ever discovered. Unfortunately, while the accuracy of the dating was still under discussion, the site was destroyed by fire in late 2002 – two years after excavation - Making remeasurement impossible.²

While URUSHI technology has often been considered to have originated in China, archaeological evidence from the Torihama Shell Mound suggests an early, indigenous development of URUSHI practices in Japan., The wood excavated at the Torihama Shell Mound in 1984 was identified as a URUSHI tree in 2004, and in 2012 it was dated to be 12,600 years old.3 This indicates that URUSHI trees were already growing naturally at that time.

In Japan, the period from approximately 15,000 to 2,400 years ago is known as the Jōmon period, named for its distinctive lifestyle and pottery styles. Archaeological evidence shows that during this period, URUSHI was already used to exploit its strong adhesive, waterproof, and lustrous properties on a wide range of materials, including pottery, wood, and bamboo baskets

Excavations at the Shimoyakebe Ruins in Higashimurayama City, Tokyo, which began in 1995, further demonstrate the Jōmon people's sophisticated understanding of URUSHI's properties. River piles dating back approximately 4,000 years were excavated at the site. Some were made of URUSHI wood, and only these showed horizontal cut marks, indicating that the trees were felled and reused after sap extraction. Because the site is a wetland, red earthenware and wooden objects coated with URUSHI mixed with pigments such as bengala (ferric oxide) or vermilion (mercury sulfide) were preserved in vivid color.4

^{1,3} The red comb and URUSHI wood are occasionally displayed and researched at Wakasa History Museum in Fukui Prefecture.

² Dating Kakinoshima B site is studied and written by Kudo, Yuichiro, The Research Report No. 225 of National Museum of Japanese History, "Questions Concerning Lacquer Culture in Jomon Period and its Origin" (2021).

⁴Unearthed articles of Shimoyakebe Ruins are displayed at Furusato History Museum in Higashi Murayama City Tokyo.

2.2.2. Repairing ceramic with URUSHI

At the Shimoyakebe Ruins, archaeologists have discovered earthenware that repaired using URUSHI as an adhesive. In these repairs, URUSHI was mixed with sand to create a putty that sealed holes and cracks. This practice can be seen as a distant forerunner of the contemporary ceramic repair technique known as "金継ぎ KINTSUGI".

KINTSUGI - literally "gold joining" - is a method of restoring broken or damaged ceramics using a mixture of URUSHI, flour glue, wood powder, and fiber, known as "刻苧 KOKUSO". The missing or damaged areas are rebuilt with this putty, shaped, coated with URUSHI, and finally highlighted with gold powder. Today, kintsugi has gained international recognition as a distinctive Japanese repair philosophy. Rather than concealing damage, it emphasizes it, allowing the history of breakage and repair to remain visible. Although the restored object no longer reflects the original intention of its maker, the act of repair expresses the owner's desire to continue using the vessel, while the addition of precious metal elevates the object's value and significance. In contrast, repairs during the Jōmon period were purely functional. While they did not extend beyond the putty stage, they demonstrate a sophisticated understanding of URUSHI's strength and adhesive properties. Jōmon-period URUSHI artifacts were created by artisans who already understood the material's essential characteristics. This accumulated knowledge - this deep familiarity with URUSHI - has been fundamental to the continuous development of URUSHI art in Japan over thousands of years.

2.2.3. Making Forms by Layering Cloth

The technique of creating forms by layering cloth impregnated with URUSHI over a mold was already practiced in China during the Han dynasty. By the mid-sixth century, it had been introduced to Japan, initially as a method for Making coffins. A URUSHI plate preserved at Anfukuji Temple in Kashihara City, Osaka Prefecture, has been identified as being reinforced with layered silk cloth. Based on its size and square shape, it is believed to be a remnant of such a coffin.

Following the introduction of Buddhism in the seventh century, this method was adopted for the production of Buddhist sculptures. Compared with wooden statues. it avoided cracking caused by wood grain and size limitations, and unlike gilt bronze statues, it required no heat source for casting. It was also relatively lightweight. By adjusting the starting point of the cloth layers, seamless forms could be created, and fine details could be modeled or carved using kokusō putty.

This technique enabled the creation of works of various scales, from the more than three-meter-tall statue of Fukūkensaku Kannon in the Hokke-dō Hall at Tōdaiji Temple to the approximately 1.5-metertall statues of the Eight Deities and the Ten Great Disciples at Kōfukuji Temple. In China, the technique was known as jiachu (read in Japanese as kyōcho). In Japan, an alms bowl made using this method appears in eighth-century texts under the name Soku-Hachi, with SOKU likely referring to body construction.

During surveys of ancient Buddhist statues conducted by the Meiji government in the late nineteenth century, this technique came to be called "乾漆 KANSHITSU" ("dry lacquer"). Today, KANSHITSU remains an important method for contemporary URUSHI artists, allowing the creation of free-form and complex shapes. Modern molds may be made not only from clay but also from plaster, styrofoam, and other materials. Although the term "dry lacquer" is now commonly used in English, it does not adequately convey the process of form-Making. For this reason, many URUSHI artists prefer to use the Japanese term KANSHITSU when explaining the technique.

2.2.4. Decorating with patterns

One of the most advanced decorative approaches in URUSHI art involves applying patterns in contrasting colors over a base layer. Vessels from the Jomon period, excavated from sites thousands of years old, already display spiral designs created with black URUSHI over a red URUSHI ground. By the seventh century, narrative imagery appeared, as seen on the Tamamushi Shrine preserved at Hōryūji Temple in Nara, which depicts episodes from the Buddha's previous lives. In the thirteenth century, URUSHIcoated tableware – previously used primarily by aristocrats - came into use among the samurai class. Decorative patterns known as urushi-e were applied, and numerous painted plates have been excavated from the ruins of a 13th century samurai residence in Kamakura Kamakura City, Kanagawa Prefecture. Most were coated with black URUSHI and decorated with red patterns, some applied not only with brushes but also using stamps.

When URUSHI remains wet, shells or thin metal plates can be affixed directly, adhering naturally due to its strong adhesive properties.

A remarkable record of such techniques appears in the donation inventory accompanying the offerings made by Empress Kōmyō to the Great Buddha at Tōdaiji Temple following Emperor Shōmu's death in 756.

The register reveals the highest levels of craftsmanship of the period. It lists works that appear, even from their names, to have continental origins, as well as sophisticated decorative techniques such as "平文 HYOMON" and "平脱 HEIDATSU", in which thin metal plates are cut into patterns and combined with materials including mother-of-pearl, amber, and tortoiseshell. These treasures have been preserved in the Shōsōin Repository at Tōdaiji Temple, together with objects used in the Great consecration ceremony Buddha's Emperor Shōmu's funeral rites.

Among the weapons recorded in the register is a "gold and silver sword" with a sheath described as makkinru. Although most of the swords were lost during the rebellion of 764, comparison with surviving artifacts indicates that the corresponding sword remains. Its URUSHI-coated sheath is decorated with images of divine birds and beasts rendered in gold powder. This decorative method is now known as "研出 蒔絵 Togidashi Maki-e" Simply put, the desired pattern is first drawn with URUSHI, and metal powder is sprinkled over the surface before the lacquer dries. As the URUSHI hardens, it binds the powder in place, creating a metallic image. The earliest known appearance of the term Maki-e (蒔絵) in historical records dates to the Engishiki, completed in 927. It is therefore likely that in the eighth century the technique existed but had not yet been called Maki-e.

Early metal powders were coarse and irregular, produced by filing metal into uneven particles. Because these particles did not adhere stably to the surface, an additional layer of URUSHI was applied after drying to secure them. Once this layer had cured, the surface was carefully polished to expose the metal particles. The decisive distinction between Japanese URUSHI art and lacquer traditions in other parts of Asia lies in the preservation, refinement, and continued development of this Maki-e technique.By the twelfth century, significant advances had been made in the production of metal powders for Maki-e. The development of finer, more uniform powders allowed the metal to adhere securely even when sprinkled directly onto wet URUSHI. This innovation made it possible to create HIRA Maki-e, a technique that did not require an additional protective overcoat. At the same time, togidashi Maki-e was often combined with raden (mother-of-pearl inlay), greatly expanding decorative possibilities and leading to the production of numerous lacquered boxes. The combination of Maki-e and raden was also applied to architectural interiors, most notably in the Golden Hall of Chūsonji Temple in Hiraizumi, Iwate Prefecture

In the thirteenth century, increasingly complex shell-cutting techniques appeared, particularly in the decoration of hand boxes. When Maki-e designs were integrated with mother-of-pearl, artisans carefully cut the shell pieces in advance to match the adjacent Maki-e patterns, rather than applying Maki-e over the shell surface. Because Maki-e applied directly on shell was prone to wear, this method strengthened the durability and stability of the decoration.

Around the same period, the technique "高蒔絵 TAKA Maki-e", known as emerged. In this method, designs were first built up in relief using an underlayer, then finished with fine metal powder.

In addition, a new powder is created. A distorted shape with a thin plate of gold and silver is made, and when it is sprinkled, the powder overlaps and the ground is uneven, so transparent URUSHI is applied to cover the top, and after drying, it is polished flat. This type of Maki-e is called "梨地 Nashiji, pear ground" because the appearance of the uneven shape of the powder overlapped under the transparent URUSHI resembles the peel of a fruit pear. The varying density of nashi-ji creates subtle contrasts of light and dark in the background. By the sixteenth century, nashi-ji was used not only as a background treatment but also as part of pictorial designs. At the same time, metalpowder production continued to advance, resulting in spherical powders, flat powders, and nashi-ji flakes in a range of sizes. Today, URUSHI artists can select and use gold and silver powders of many different types and sizes to create their works...

3. ENCOUNTER WITH THE WEST

3.1. Western interest in Urushi

In 1543, Portuguese traders arrived in Japan, followed in subsequent decades by Spanish and Italian visitors, many of whom were accompanied by Christian Japanese lacquerware missionaries. combining Maki-e particularly works and mother-of-pearl - quickly captured Western attention. Japanese merchants began receiving commissions for Christian devotional objects such as Bible stands and small shrines, as well as for furniture adapted

to Western tastes, including chests, cabinets, and arched coffers. These export pieces were richly decorated with dense plant and animal motifs executed in HIRA Maki-e and mother-of-pearl. Today, this body of work is known as Nanban URUSHI art, a term that distinguishes it from later export lacquer produced after Japan entered a period of national isolation. In the seventeenth century, Christianity was banned and foreign contact was severely restricted. However, trade with the Dutch continued through the enclave of Dejima in Nagasaki. As a result, Japanese lacquer production shifted to suit Dutch preferences. Export works from this period typically contrasted the brilliance of gold HIRA Maki-e and TAKA Maki-e against deep black URUSHI grounds. In Europe, Japanese lacquerware was rare and costly. Imported objects were often dismantled, with lacquered panels removed and incorporated into locally made furniture. Chinese lacquer panels were also exported to Europe and displayed alongside Japanese works in aristocratic interiors known as "lacquer rooms." Because URUSHI trees do not grow in the West, European artisans attempted to replicate the appearance of Japanese lacquer using resin-based materials such as shellac, which had entered Europe earlier through the Islamic world.

In England, this fascination culminated in the publication of A Treatise of Japaning and Varnishing in 1688 by John Stalker and George Parker. While the book promoted lacquer imitation as a suitable pastime for women, it also included detailed recipes for large-scale decorative work that required workshop facilities. This imitation technique spread throughout Europe under the name "japanning." The very term reflects how deeply Japanese Maki-e had impressed European audiences, becoming synonymous with lacquer decoration itself.

3.2. Imitating the Decoration Techniques from other Asian Countries

Japan's lacquer tradition also evolved through the selective adaptation of techniques from other parts of Asia. One such method, introduced from China in the fourteenth century, is known as "鎗金 Sohkin". In this technique, fine lines are carved into the URUSHI surface, filled with lacquer, and then inlaid with gold powder or gold leaf. In Japan, nine sutra boxes from China's Yuan dynasty survive, including a box with a peacock motif preserved at Jōdoji Temple in Hiroshima Prefecture. Inscribed with a Chinese date of 1315 and a Japanese date of 1358, it indicates that the object arrived in Japan sometime during that forty-year span.

By the mid-fifteenth century, this technique had been adopted and recorded in Japanese texts under the name CHINKIN "沈金". Differences in lacquer composition and surface hardness between Chinese and Japanese works likely prompted refinements in carving tools and techniques. CHINKIN has been continuously practiced ever since, and today Wajima City in Ishikawa Prefecture - where the technique was introduced in the early eighteenth century – is a major center of production with many skilled artisans.

Another influential import was tihong (read in Japanese as tekikō), a Chinese technique in which thick layers of vermilion lacquer are built up and then carved with decorative patterns. Such works were brought to Japan in the fifteenth century and came to be known as "堆 朱", TSUISHU. Because these Chinese imports ("唐物" KARAMONO) were extremely expensive, Japanese artisans

developed a more economical alternative. Instead of carving through multiple layers of lacquer, they carved designs into wood bodies in advance and then applied lacquer over the surface, reducing both time and labor.

This approach flourished in Kamakura, which became a political and religious center after the establishment of the Kamakura shogunate since the 12th century. Monks returning from China brought red-lacquered objects with them, while carpenters and Buddhist sculptors gathered in the city to construct new temples. Drawing on advanced woodcarving skills, Kamakura emerged as the principal production center for this technique, which became known as "鎌倉彫 Kamakura bori". Notably, it is an example of a lacquer technique named after its place of origin – a tradition that continues today, with Kamakura still recognized as its primary center.

Another decorative method, known in Myanmar as 蒟醬 KINMA, involves engraving lines into lacquered surfaces and filling them with colored pigments. In Japan, this technique was studied and reproduced in the nineteenth century by the artisan Zōkoku (1806–1869). Tamakaji The process is complex: first the entire surface is masked with transparent sap (oil), then lines are engraved and vermilion lacquer put into the grooves, dried, and washed. The whole process would be repeated over and again, while yellow pigment would be added until eventually three colors appear along the grooves. Three times of masking help protect the formal colored line well.

(modern-day Kagawa In Sanuki Prefecture). however, technique the underwent a distinctive transformation. Instead of filling grooves with pigment, artisans painted the lines with colored

URUSHI raised to the surface level. After polishing, the surface became smooth, with the design revealed through color rather than depth. Kagawa remains the primary production area for this variation today. The use of pigments within engraved lines learnt from Myanmar can also be seen in CHINKIN techniques practiced in Wajima and Kiso, where colored powders are used in place of gold to expand the decorative palette.

3.3. Exporting New URUSHI-Ware from Nagasaki

Japan's period of national During isolation, which began in the midseventeenth century, Nagasaki emerged as the country's sole international trading hub. Through this port, copperplate prints from Europe reached Japanese Maki-e artisans, who began translating these images into lacquer decoration. Using black-URUSHIcoated copper plates as their surfaces, artisans reproduced the prints on brackets and small plaques intended for wall display. Maki-e artisans studied black ink prints on white paper and reinterpreted them using gold and black lacquer. They meticulously reproduced portraits of historical figures, records of warfare, tourist attractions, and even alphabets, despite having no understanding of the content itself. The hatching technique, commonly employed to create shading in copperplate prints, proved particularly effective in Maki-e, as it allowed line drawings to be rendered precisely with a fine brush.

Urushi-ware produced to suit Dutch tastes typically featured designs with a predominance of black in the background. However, by the late Edo period in the century, mother-of-pearl eighteenth decoration began to appear on export

lacquerware. Thinly polished shells, which are nearly transparent, were either painted or illustrated on the reverse and backed with silver leaf or similar materials to prevent transparency, or left unpainted if the shell possessed a strong natural blue hue. These shells were applied to furniture exported from Nagasaki, a technique that came to be known as Nagasaki Raden.

4. URUSHI ART IN THE AGE OF **MODERNIZATION**

In the late nineteenth century, Japan's long period of isolation came to an end, the samurai regime collapsed, and sovereignty was restored to the emperor in 1868, marking the beginning of the Meiji era. During this period, the government actively participated in World Expositions, increasing opportunities to showcase Japanese urushi art internationally. Ironically, while the primary aim of these exhibitions was to earn foreign currency to machine-based industrialization, support it was traditional Japanese handicrafts that confidently represented the nation abroad.

At the Vienna World's Fair in 1873, Japanese works were warmly received, leading to business negotiations. As a result, an export company known as Kiryu Kosho Gaisha (起立工商会社) was established the following year. By employing artisans to ensure a stable supply of goods, the company contributed to the preservation of traditional skills and the livelihoods of craftsmen. Prior to Japan's participation in the Paris World's Fair in 1875, the Meiji government commissioned Mayori Kurokawa (1829-1906) to publish Kogei Shiryo, a comprehensive survey of Japanese crafts. The section on urushi craftsmanship begins with the mythical origins of lacquer art and traces its development through the establishment of urushi-related official posts under ancient imperial administrations, as well as the regional lacquer industries across Japan.

Between 1877 and 1903, five National Industrial Exhibitions were held to promote industry and expand trade. Pavilions were constructed in Tokyo, Kyoto, and Osaka, featuring modern attractions such as railways, aquariums, electric illumination, and elevators, which drew both foreign visitors and domestic and symbolized audiences Japan's smooth transition toward modernization. At both international expositions and exhibitions, urushi artworks national received awards, providing significant encouragement to lacquer artisans.

The Tokyo Art School was founded in 1887 as an institution dedicated to the systematic study of fine arts and crafts. Even before its establishment, the American scholar Ernest Fenollosa (1853-1908) and the Japanese intellectual Tenshin Okakura (1862-1913) conducted extensive research on Japanese antiquities, emphasizing the importance of preserving traditional culture within a rapidly industrializing society. From the school's inception, a Department of Urushi Techniques was established, with instructors recruited from master artisans active during the late Edo and early Meiji Shomin Ogawa (1847–1891) became the first instructor of the department in 1890, followed by Shosai Shirayama (1853-1923) after Ogawa's death.

The first graduate of the Urushi Department was Shisui Rokkaku (1867-1950). Accompanying Tenshin Okakura to the United States, Rokkaku worked on the restoration of urushi objects and studied Western painting techniques. Upon returning to Japan, he contributed to the development of colored urushi and participated in archaeological surveys of historical sites in the Lelang Commandery in Korea. Through such activities, he became one of the key figures linking urushi lacquer art to a global network during this period.

In the early years, many graduates of the Tokyo Art School remained at their alma mater as instructors due to the limited number of trained artists. Their skills and methods were thus passed directly to subsequent generations. After World War II, the Tokyo Art School was reorganized as Tokyo University of the Arts. Notably, the same Maki-e motifs used on practice handboards during the school's early instructional period continue to be employed in Maki-e training at the university today. Moreover, graduates who went on to teach urushi art at other institutions are said to have adopted the same motifs in their own classes. In this sense, even students who have never studied at Tokyo University of the Arts may still be practicing Maki-e using identical traditional patterns.

5. EXCHANGE AND TRANSMISSION

5.1. Creation requires mastery

The reason for examining the historical development of urushi art in Japan is that urushi is a creative practice that cannot begin without mastery of technique. From the Jōmon period to the present day, new methods of painting and decoration have only emerged after artisans fully understood the properties of urushi. Technical knowledge has always preceded artistic innovation.

Although Maki-e developed as a distinct technology within Japan, in recent years an increasing number of international students - from China, South Korea, Taiwan, and various European countries – have come to Japan to study URUSHI art. If these students later teach the Maki-e techniques they have learned in their home countries, the practice will inevitably spread, and the day may come when Maki-e can no longer be described exclusively as a Japanese technique. For this reason, it is important to understand Japanese URUSHI art, particularly Maki-e, not merely by learning surface-level techniques. but by studying its historical development and cultural context.

KINTSUGI is ultimately completed by sprinkling gold powder over repaired areas and may therefore be understood as a form of HIRA Maki-e. In Western Europe, interest in learning KINTSUGI has grown rapidly, and we have conducted lectures and workshops in the United Kingdom, Spain, China, and Taiwan. When asked about their experiences, some participants responded, "I followed a book," while others said, "I filled the cracks and applied gold powder in a single day." Such one-day repairs using quick-drying synthetic resins should not be called KINTSUGI. They are better described as repairs using substitute materials rather URUSHI. Authentic KINTSUGI than involves multiple stages, from bonding with URUSHI to applying gold powder, and requires at least several days to complete. Although the term KINTSUGI has become widely known, there is a growing risk that its meaning and practice will be misunderstood.

5.2. Toward a lacquerware heritage belt in the Asia-Pacific region

It is difficult to draw a clear distinction between artists and artisans engaged in lacquer production. What, then, defines an artisan? An artisan must possess manual skills, be capable of repeatedly producing standard items of consistent quality, respond to customer demands, and work in exchange for remuneration.

In workshops where labor is divided and specialized, the same process may be repeated over and again. Some workshop owners engage in creative work during their spare time, while others, including myself, devote themselves entirely to creative activities. When one creates original designs, one may identify as an artist. However, because such work cannot always maintain standardized quality or supply, it may be presumptuous to claim the title of artisan. From an outsider's perspective, however, individuals with skilled hands who make objects professionally may still be regarded as artisans.

In essence, urushi production cannot exist without technical mastery. Across the Asia-Pacific region, different terms and roles are used in lacquer production, and while there is no need for a unified definition, mutual understanding of these positions is essential when discussing cultural protection. In Japan, a robust traditional base construction method known as Hon-Kataji (本堅地) is widely used. Cloth is adhered to the base

with urushi glue, after which a foundation (地ji) - a mixture of base clay and urushi - is applied in approximately five layers of varying roughness, each layer being carefully abraded. Once the surface is smoothed and consolidated with urushi, brush coating begins, typically applied two or three times. Because of the numerous steps involved, production requires many days, and labor costs increase accordingly.

By contrast, some producers uses animal glue or other adhesives instead of urushi, and some others rely on synthetic industrial bases. Because urushi coatings form a dense and resilient film, it is often impossible to distinguish the quality of the base by observing the finished surface alone. However, over time, wear and damage reveal inferior or inexpensive base materials. Although base construction methods vary by country, it is essential not only to compare finished surfaces but also to exchange knowledge about foundational techniques.

During visits to workshops in Bagan, Myanmar, and the outskirts of Hanoi, Vietnam, we learned that local soil collected from nearby rivers is used for base materials compatible with lacquer. Through experimentation, artisans determined which soils were suitable. Similarly, the thirteenthcentury lacquerware of Chūson-ji Temple in Iwate Prefecture employed local soil as a powdered base material, while since the nineteenth century, Kiso Hirasawa in Nagano Prefecture has used Kiso-sabitsuchi, clay gathered from nearby marshes to create durable foundations. Appropriate materials often exist close at hand

When considering the sustainability of natural sap lacquerware, factors such as

regional economic conditions, productivity, cost reduction, and durability must all be addressed. Demand is also crucial: artisans can continue working only if there are people who wish to use lacquerware, just as toolmakers can survive only if their tools are needed. Rising material costs and the declining number of specialized tool manufacturers pose serious challenges. Without users, natural urushi lacquer art cannot endure.

In order to sustain urushi lacquer culture across the Asia–Pacific region, artists and artisans must cultivate relationships with users who appreciate and enjoy urushi wares. To achieve this, it is essential to exchange design ideas, understand regional preferences, and engage in direct dialogue. Gathering together in shared spaces – both physically and intellectually – will play a vital role in ensuring the continued vitality of urushi heritage.

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