

# National Research Institute of Cultural Heritage

**VOL. 09 | 2025 Summer**



National Research Institute of  
Cultural Heritage

COVER STORY

Lacquerware and Everyday Artifacts Excavated from the 2,000-Year-Old  
Archaeological Site in Bonghwang-dong in Gimhae

From delicate lacquered vessels  
and adze handles to bird-shaped wooden objects—  
we follow the traces left on this land  
and gently touch the forgotten path of ancient times.

- 1. Lacquered Du-type Vessel
- 2~4. Lacquered Du-type Vessel — Interior and Diagonal Views
- 5. Lacquered lid
- 6. Wooden object in the shape of a jar
- 7. Bird-shaped wooden object
- 8~9. Lacquered lids



NRICH VOL. 09 | 2025 Summer

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# A Window Connecting the Past and Opening the Future

Stories that embody the value of cultural heritage are  
once again coming your way.



In this refreshing month of June, the NRICH (National Research Institute of Cultural Heritage) is pleased to present a new edition of 『NRICH』, our flagship newsletter, filled with new stories.

In 2024, we marked a new beginning by changing our name to the National Research Institute of Cultural Heritage (NRICH) and transitioning to the National Heritage System, aiming to further elevate the value of cultural heritage. Amid these changes, 『NRICH』 seeks to serve as a vital channel of communication, sharing our institute’s past, present, and future with the public.

In 2025, 『NRICH』 will highlight NRICH’s latest research outcomes across various fields with greater depth and clarity. We also plan to feature engaging and accessible topics that appeal to readers of all ages, highlighting diverse stories and insights from national heritage research and investigation.

Cultural heritage is a treasured legacy that links the past and present and opens the way to the future. We hope 『NRICH』 will be a small but meaningful gift that brings the beauty and significance of cultural heritage into your everyday life. We kindly ask for your continued interest and warm support.

Thank you.

June 2025  
**Lim Jong-deock**  
Director-General, National Research Institute of Cultural Heritage



# Our First Birthday Under the Name of National Heritage

On May 17, 2024, we were reborn under a new name. From Cultural Property to National Heritage, and from National Cultural Heritage Institute to the National Research Institute of Cultural Heritage, this transformation was more than a simple name change—it marked a fundamental shift in how we understand and value our cultural heritage. We celebrated the first anniversary of this meaningful new beginning with a special ceremony.

We breathed warmth into the word “first” as we walked alongside those who applauded, exchanged encouraging glances, and shared a slice of cake.

The days we’ve dedicated to reinterpreting the value of cultural heritage and turning that understanding into action through policy and research are now shaping a new standard.

Moving forward, the NRICH will continue to serve as a bridge connecting the past and the future, evolving into Korea’s leading comprehensive research institute for cultural heritage.



# 1st Anniversary



## 2025 NRICH Ambassador Appointment Ceremony

# With Ambassador Fabien, Promoting the Value of Korean Cultural Heritage

On April 3, the 2025 NRICH Ambassador Appointment Ceremony was held at Heungbokjeon Hall in Gyeongbokgung Palace. French broadcaster Fabien was appointed as the ambassador and is expected to play a key role in spreading awareness of the value of Korean cultural heritage.

The ceremony featured an ambassador inauguration event and an on-site inspection of safety and disaster preparedness. We take a look back at the appointment ceremony and hear Fabien's thoughts and resolutions in his new role.

### Welcoming a New Ambassador to the NRICH

As cherry blossoms began to bloom and the chill of winter gave way to the warm sunlight of spring, something special arrived at the NRICH. On April 3, the *2025 NRICH Ambassador Appointment Ceremony* was held at Heungbokjeon Hall in Gyeongbokgung Palace.

This event marked a grand new beginning, as the Institute launched its efforts to enhance international visibility by promoting its research achievements and actively engaging in outreach through collaboration with its ambassador.

French broadcaster Fabien was officially appointed as the 2025 ambassador of the NRICH. A former youth Taekwondo national team member in France, Fabien holds permanent residency in Korea and even acquired Level 1 Korean History Certification, demonstrating his deep interest in Korean history and cultural heritage. He also has a longstanding relationship with the NRICH, having participated in related events such as YouTube content production for the National Intangible Heritage Center in 2022 and hosting the opening ceremony of a palace museum exhibition in 2024. Fabien's experience as an ambassador extends to many institutions. Notably, he served as a special commentator for the opening ceremony of the 2024 Paris Olympics and was the ambassador for the France Pavilion at the Expo 2012 Yeosu Korea. In his remarks at the appointment ceremony, Fabien

said, "I've always had a deep interest in cultural heritage, so I consider this appointment both a great honor and a meaningful opportunity." He added, "As an ambassador, I will do my best to inspire people around the world to take an interest in Korea's history and cultural heritage research."

### Fabien Takes His First Step as a Cultural Heritage Guardian

One of the highlights of the appointment ceremony was the on-site safety and disaster preparedness inspection, held immediately after the ambassador celebration event. In a special role as a one-day honorary curator, Fabien joined the NRICH's safety and disaster research team to inspect various areas of Gyeonghoeru Pavilion and Hyangwonjeong Pavilion in Gyeongbokgung Palace, checking the structural stability and preservation status. The event drew much attention for its hands-on nature. Following this appointment, Fabien is expected to actively promote cultural heritage in his role as ambassador over the next year, fully embracing the part of an honorary curator.

To engage a broad range of generations and enhance public awareness and recognition of the NRICH, Fabien is expected to take part in promoting various research activities, international academic events, and global exchange efforts.



NRICH Ambassador  
Fabien

Director-General, NRICH  
Lim Jong-deock



As a young boy training in Taekwondo, he naturally developed an interest not only in Korea but also in its culture. As a college student, he visited Korea for the first time and experienced its cultural heritage with his own eyes and feet. Seventeen years later, Korea has become his second home. This is the story of Fabien, appointed as an ambassador for the NRICH.



“I will help make cultural heritage more accessible and familiar.”

— Fabien, Ambassador, NRICH

**Q.** The appointment ceremony took place at Gyeongbokgung Palace. That must have added special meaning to the event.

**A.** Gyeongbokgung has become not only a Korean cultural landmark but also one of the most popular tourist attractions for international visitors to Seoul. So to be appointed in such a symbolic place was an incredible honor. What made it even more special is that I currently live in Jongno-gu, so Gyeongbokgung feels both extraordinary and familiar to me.

I pass by it at least twice a day—I often refer to it as my *neighborhood palace*. That said, even for someone living nearby, it’s not easy to get the chance to explore various parts of Gyeongbokgung up close. After the commemorative event, serving as a one-day honorary curator and exploring rarely accessible sites like Gyeonghoeru and Hyangwonjeong was an especially memorable experience.

**Q.** You’re known for your deep affection for Korea. What does Korea mean to you personally?

**A.** This year marks my 16th year living in Korea. I think that fact alone reflects how I feel about the country. Although I’ve lived here for 16 years, my connection to Korean culture began when I was about four or five years old. Learning Taekwondo was what first connected me to Korea and its culture—it felt like destiny. Without Taekwondo, I don’t think I would feel the same deep affection for Korea as I do today. What began as affection for the homeland of Taekwondo has, over the years, taken root in many aspects of my daily life. Korea is now deeply woven into who I am.

**Q.** Among Korea’s diverse cultural elements, what are you most interested in?

**A.** I’ve always been drawn to the arts. I enjoy paintings and visual arts in general, and I’m particularly fascinated by the unique aesthetic and artistic sensibilities found only in Korea.

When I study the cultures of the Three Kingdoms—Baekje, Silla, and so on—I’m amazed by their high level of artistry and often find them deeply intriguing. I’m also very fond of Korean architecture. Unlike Europe, Korea has many wooden structures, which I find particularly fascinating. What’s even more interesting is that many of them are Buddhist buildings.

Most of these wooden structures are beautifully integrated into natural landscapes like mountains and forests, creating truly stunning scenery. Take Seoul, for example: it’s a bustling and hectic city, yet you’ll find palaces and mountains right in the center. That coexistence with nature is one of Korea’s most captivating features.



**Q.** As an ambassador, which Korean cultural heritage site would you most like to introduce to people in Korea and abroad?

**A.** Personally, I’m very fond of Gyeongju. It’s well known as the ancient capital of the Silla Kingdom, which lasted for a thousand years. Among its many cultural artifacts, I’d have to highlight Seokguram Grotto. When I first visited Korea 18 years ago as a university student on a backpacking trip, the place that left the strongest impression on me was Seokguram.

Back then, as a European, I knew almost nothing about Buddhist art. But after visiting Seokguram, I was completely overwhelmed by its sheer grandeur—it was truly awe-inspiring.”

That moment left such a strong impression that I can still vividly recall how I felt. Whenever family or friends visit me in Korea, I always make sure to take them to Seokguram.

**Q.** As an ambassador, what is your unique approach to promoting Korean cultural heritage? What aspects do you plan to focus on most, and what are your goals and determination for the role?

**A.** When people hear the term “*cultural heritage*,” most react by saying it sounds *difficult* or *unfamiliar*. Even one of my friends, upon hearing that I’d been appointed as an ambassador, congratulated me by saying, “*How did you manage to take on such a hard task?*”

But I believe cultural heritage isn’t difficult or distant at all. On the contrary, it’s something very familiar and closely tied to our daily lives.

That’s why changing people’s perception is so important. I hope more people can feel a closer connection to cultural heritage. As an ambassador, I’ll do my best to share Korea’s heritage through on-site research, international events, and social media.





Featured Column

The following are the top research achievements of 2024, selected as the best among NRICH's various research projects.

NRICH Report ❶

Research on Royal Tombs in the Baekje Cultural Area

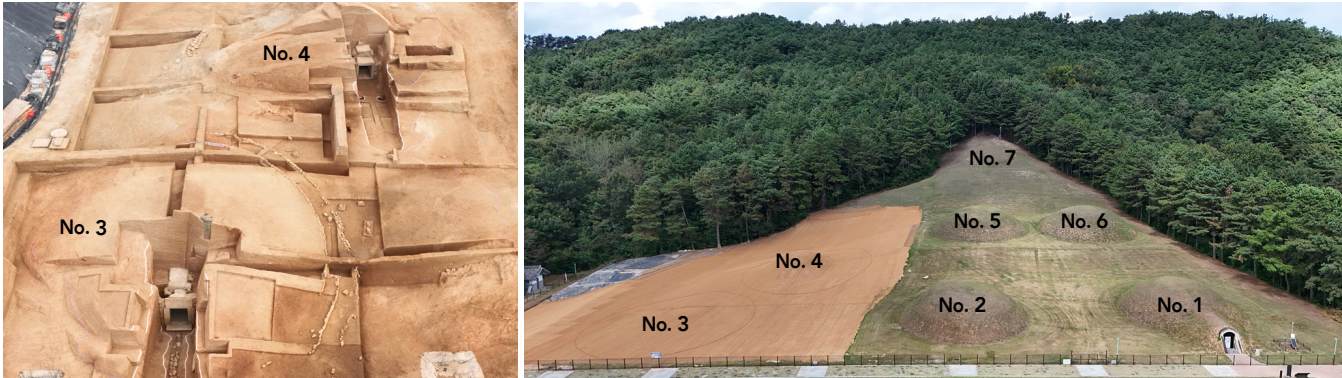
Oh Dong-sun

Researcher, Buyeo National Research Institute of Cultural Heritage

**The Research on Royal Tombs in the Baekje Cultural Area focuses on the Tomb of King Muryeong and Buyeo Royal Tombs in Gongju (formerly Ancient Tombs in Songsan-ri, Gongju) and Buyeo Royal Tombs (formerly the Buyeo Neungsan-ri Ancient Tombs). The project is composed of sub-topics aimed at exploring the structure and management system of Baekje's late-period royal tombs, their surrounding societal systems, and developing restoration and maintenance plans.**

Baekje royal tombs were originally clustered in designated locations from the Hanseong period, and this tradition continued and evolved through the Sabi period. By the Sabi era, the location and layout of the royal tombs had come to follow a well-organized and systematic pattern. Understanding the burial culture of the highest social class—the royal family—is crucial to interpreting the social structure of the time. This is because elite classes exclusively enjoyed high culture and advanced technologies, while lower classes imitated or were subject to the influence of these practices, thus shaping the broader funerary culture of the period. However, research on late Baekje royal tombs faces significant limitations. Most of the tombs were already looted before being excavated during the Japanese colonial period, and large-scale restoration projects were

carried out in the 1970s. While the colonial-era excavations left behind records of their time, they are insufficient for in-depth academic research. Moreover, the restoration in the 1970s significantly altered the original scale and landscape of the tombs, distancing them from their authentic appearance 1,500 years earlier. Despite these conditions, the late Baekje royal tombs were inscribed as a UNESCO World Heritage site in 2015. In 2019, they were designated as a top-priority target for further investigation, with the aim of recovering their original form and improving research accessibility (Cultural Heritage Administration, 2019 Master Plan for Excavation of Core Sites in the Baekje Historic Areas). Accordingly, excavation work on Tombs No. 3 (Seohachong) and No. 4 (Jungsangchong) at Buyeo Royal Tombs has been underway since 2021. The investigation revealed that the central tomb group, although now flattened, was originally situated across two ridges. Tombs 3 and 4 were located on the western ridge. It was also discovered that the current north-south alignment of the mounds was artificially created during the restoration process. The study successfully obtained high-quality data on the original location of the tombs and the precise structure and dimensions of the stone chambers, both internally and externally.



● View of Tombs No. 3 and No. 4 at Buyeo Royal Tombs after Excavation ● View of Tombs No. 3 and No. 4 at Buyeo Royal Tombs after Temporary Backfilling

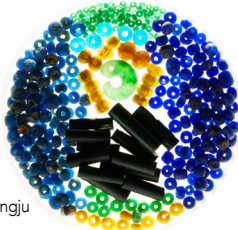


● Excavation Site of the Tomb of King Muryeong and Royal Tombs in Gongju ● Ongoing Excavation of Tombs No. 1–3 at the Tomb of King Muryeong and Royal Tombs in Gongju

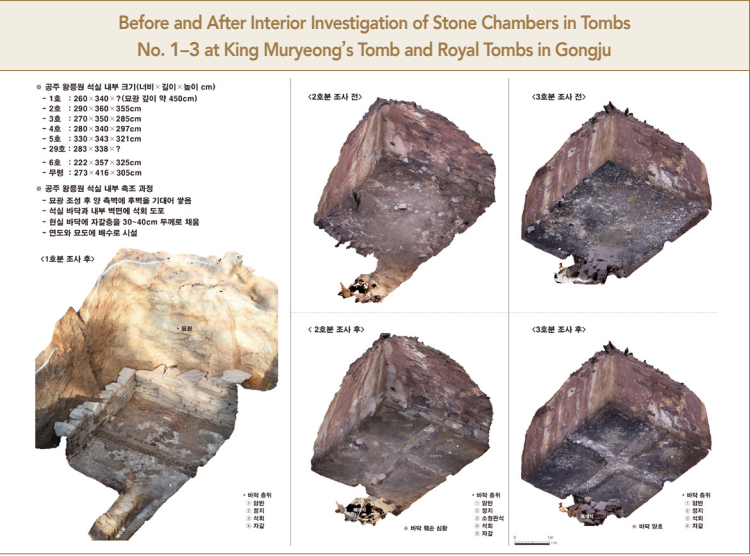


● Joint Special Exhibition Held with the Seoul Hanseong Baekje Museum

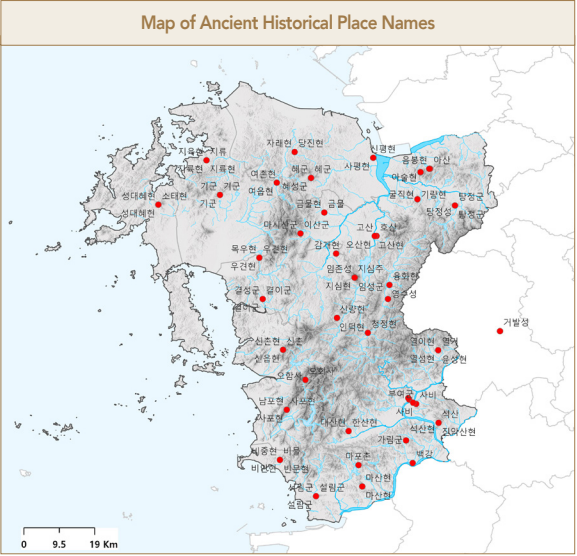
Having established baseline data for restoring the landscape of Buyeo Royal Tombs, research is now underway to reconstruct the landscape based on the original topography. In coordination with Buyeo County, a research service was commissioned. Based on its outcomes, a restoration plan will be presented and a public consensus formed, after which a final decision will be made by the Cultural Heritage Committee. The Tomb of King Muryeong and Royal Tombs in Gongju are undergoing a similar process. Excavations are currently in progress for Tombs No. 1 to No. 4. Although these tombs were previously investigated during the Japanese colonial period, recent studies have unearthed numerous artifacts—including decorative earrings, rings, glass beads, various gold ornaments, and ornamental coffin nails—from the gravel flooring within the tomb chambers. Given the structural vulnerabilities of the stone chambers, a parallel research project is being carried out to develop stabilization measures. Based on the results, the direction for restoration of the stone chambers will be determined. Other ongoing efforts include osteological research comparing the physical characteristics of Baekje elites and commoners, a joint special exhibition and international academic conference in collaboration with the Seoul Hanseong Baekje Museum, the establishment of a historical place name database for the Chungcheongnam-do region using a Geographic Information System (GIS), and field studies in Japan and China aimed at comparing the structure, layout, and operational principles of late Baekje royal tombs. By 2026, a comprehensive restoration plan will be formulated based on the scientific analysis of the landscape of Baekje's late royal tombs. In parallel, in-depth studies on these tombs will also be carried out.



● Artifacts Excavated from Tomb No. 2 at the Tomb of King Muryeong and Royal Tombs in Gongju



● Structural Layout of the Stone Chambers in Tombs No. 1–3 at the Tomb of King Muryeong and Royal Tombs in Gongju





# Study on the Evolution of the Silla Palace Fortress System

Jang Ki-myeong

Researcher, Gyeongju National Research Institute of Cultural Heritage



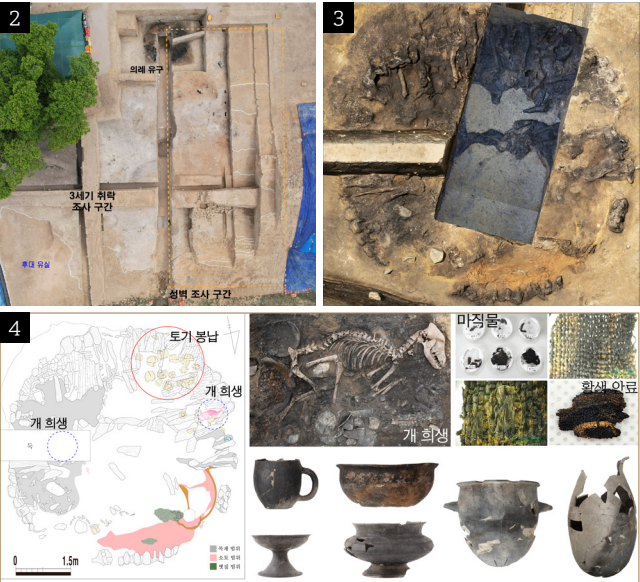
“Study on the Evolution of the Silla Palace Fortress System” is a comprehensive research project aimed at the restoration and utilization of Silla’s royal fortress. The project encompasses the excavation of Wolseong, interdisciplinary research, restoration and maintenance, and public engagement. Launched in 2015, the project established a mid- to long-term master plan and devised a phased, systematic implementation strategy.

To achieve integrated results, the project incorporates archaeological excavations, historical research, paleoenvironmental analysis, architectural conservation and restoration, public briefings, special exhibitions, and mobile cultural heritage education programs.

### Wolseong Royal Fortress Revealed through Excavation

Based on ground-penetrating radar (GPR) surveys, the Wolseong excavation area was divided into Zones A to D, allowing for systematic and detailed investigations. In Zone A, excavations focused on the southern fortress wall and settlement remains from the Saro-guk period. Zone C was opened to uncover the inner palace structures, with excavations targeting building sites. According to historical records, “In the spring of the 22nd year of King Pasa (101 AD), a fortress was built and named Wolseong. That July, the king moved into the fortress.” However, excavation results indicate that the stone fortress walls were constructed in the mid- to late 4th century. Cultural layers and settlement remains suggest the site had already been occupied as early as the early 3rd century.

One structure from the Saro-guk period found in Zone A was initially used as a residence and later converted into a ritual site, after which it was burned. Excavation revealed the sacrificial remains of two dogs, a ring-pommel sword, crystal ornaments, yellow hemp textiles, and over 30 pottery items. This type of 3rd-century ritual is not documented in historical texts and is especially notable for having occurred near the entrance of a newly developed settlement in a relatively remote area. Investigations in Zone C, focused on the inner palace, have so far uncovered eight building sites, ten wall remains, one square structure, and one tile pile from the Unified Silla cultural layer. The building sites at the uppermost layers show signs of overlapping construction and are classified chronologically into three phases: early Unified Silla expansion, mid- to late 8th-century reconstruction, and eventual abandonment. In terms of layout, the buildings are believed to have been divided spatially, with the central building complex reported in 2021 and the southeastern complex currently under excavation separated by walls.



- 1. Excavation at Wolseong
- 2. 3rd-century settlement remains beneath the southern wall in Zone A
- 3. Ritual structure near the settlement entrance
- 4. Context of the ritual structure

### Interdisciplinary Research to Reconstruct the Ancient Environment of Silla’s Capital

The Wolseong project is applying interdisciplinary research methods to reconstruct the climate and lifestyle of the Silla period. A large quantity of wooden artifacts has been excavated from the Wolseong moat, providing insight into climate fluctuations from 1,500 years ago. By comparing these ancient woods with native trees currently growing in the Gyeongju region, researchers have confirmed the possibility of paleoclimate reconstruction. These findings also show similar trends to climate changes across Asia, and precipitation changes during the moat’s construction period have helped identify climate events such as droughts. More recently, empirical reconstructions of life in the Silla royal capital have been pursued through the analysis of parasites, pollen, and other remains uncovered during investigations in Gyeongju. There is growing evidence of a potential organic connection between parasites found in moat soil, diseases described in historical records, and environmental changes such as deforestation. Changes in forest conditions associated with the development of the royal capital, as described in historical texts, are also being confirmed through pollen analysis, highlighting the need for systematic sample collection to support further research on the urban and ecological environment surrounding the royal palace.



● Academic Conference on the Living Environment of Silla’s Royal Capital Residents

### Wolseong Public Engagement and Education Programs with Citizens

Wolseong’s public outreach and education programs include: ❶ Daedam Silla: Talking Silla Face-to-Face, ❷ Wolseong, Palace of Light night event, ❸ Humanities Lectures, ❹ Dig with Wolseong Classroom, and ❺ Summer Excavation Camp. Daedam Silla is a tea-time talk concert held in the evening, where Gyeongju citizens gather to share stories about Silla’s history and cultural heritage. Wolseong, Palace of Light is a two-day event at the excavation site featuring a variety of hands-on programs. The Humanities Lectures invite prominent speakers to deliver six cultural heritage talks each year. The Dig with Wolseong Classroom promotes the site’s research achievements using board games and 3D puzzles developed in-house by the outreach and education team. Recently, Wolseong-themed learning kits have become a hit with the public.



- 5. Photo zone at the Wolseong Exhibition Hall
- 6. “Dig with Wolseong” Excavation Classroom
- 7. Summer Excavation Camp

The “Time Travel to Wolseong” board game allows players to move their pieces according to dice rolls and learn about various Wolseong relics by reading brief explanations written on the board. The “Build Your Own Wolseong Moat” 3D puzzle helps players understand the evolution of Wolseong’s northern moat—originally a defensive structure—along with excavated artifacts and environmental context, all through interactive play. In 2024, celebrating the 10th anniversary of the Wolseong Project, Lee Jae-sung, Korea’s national soccer team No. 10, was appointed as Wolseong’s ambassador. Wolseong was once known as *Jaeseong* (在城) during the Silla period, a name that shares the exact same Chinese characters as Lee Jae-sung’s own. To mark the occasion and his 10th career anniversary, a fan signing event with Gyeongju citizens was held at Wolseong.



- 8. Wolseong, Palace of Light: Night Performances
- 9. National Football Team Player Lee Jae-sung Appointed as an Ambassador

#### Published Papers and Conference Presentations

[KCI-Indexed Journals]

- Jang Ki-myeong, “The Emergence of Early Polities in the Yeongnam Region and the Structure of Saro-guk,” *Journal of Korean Ancient History*, No. 123.
- Kim Da-som & Kim Heon-seok, “An Examination of Animal Remains Excavated from a Unified Silla Workshop Site in Gyeongju,” *Archaeological Plaza*, No. 35.
- Ahn So-hyeon, “Urban Environments of Ancient Cities Through Microfauna and Flora: Focusing on the Silla Royal Capital,” *Journal of Korean Ancient History*, No. 126.
- Nam Tae-gwang, “A Study on the Wooden Bank Structures of the Wolseong Moat,” *Silla Culture*, No. 65.

[Overseas Conference Presentations]

- Kim Heon-seok, “A Study on the Dismantling and Disposal Patterns of Animal Remains Excavated from the Unified Silla Period in the Gyeongju Area,” *The 21st Congress of the International Federation of Associations of Anatomists*.
- Ji Yeong-bae, “New Cases of Human Sacrifice Ceremony on Silla Palace, the Wolseong Fortress Site, South Korea,” *Art, Myth and Ritual: Comparison on Early China and Mesoamerica*.



# Research on the Characteristics and Applicability of Traditional Materials

Lee Sun-myung, Jeong Seon-hwa  
Researchers, Restoration Technology Division

**The Research on the Characteristics and Applicability of Traditional Materials is a research project launched in 2022. Its goal is to identify the properties of traditional materials that are disappearing due to industrialization—or already lost—and to secure foundational technologies for restoration. The project also aims to establish an academic basis for the safe use of traditional materials in national heritage repair sites. The study has focused on three main materials: traditional Hanji (Korean paper), traditional Dancheong pigments, and traditional lacquer. Now in its third year, the project presents its academic, policy, and technical outcomes from the research on traditional materials.**

Research on Traditional Hanji

Traditional Korean Hanji is globally recognized for its durability and excellent preservation qualities. However, in-depth scientific research on it has remained limited. In particular, traditional wallpaper Hanji is a unique Korean material with no equivalent in China or Japan. Given the lack of research on the preservation conditions and characteristics of old wallpaper Hanji found in heritage sites, there was a growing need to establish a basis for its application. To address this, field investigations were conducted at major Joseon-era palace sites such as the Five Grand Palaces and Jongmyo Shrine to assess the usage of palace wallpaper Hanji. Samples were collected from these sites and related archives, and their material characteristics were analyzed. Through this work, baseline data was secured to support the restoration of Joseon palace wallpaper Hanji. The study also investigated the manufacturing processes of traditional Hanji used by nationally and regionally designated intangible cultural heritage bearers (Hanji artisans) and analyzed the properties of Hanji produced for conservation and restoration purposes. A comprehensive survey was carried out to document the craftsmanship, and a systematic scientific database framework is being established for inclusion in future research reports. In 2024, based on the accumulated research, the team achieved a major milestone: they successfully proposed a new Korean Industrial Standard (KS) for traditional Hanji under the pulp and papermaking category, which passed the KS expert committee. Additionally, in support of authenticity and

quality improvement in the repair of national heritage, a “detailed evaluation standard for Hanji certification” was newly established as part of the traditional materials certification system.



● Investigation of Palace Wallpaper Hanji at the Royal Shrine of Sinseonwon, Changdeokgung Palace



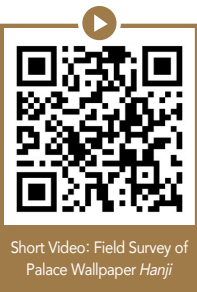
● Investigation of Palace Wallpaper Hanji at Jibokjae Pavilion, Gyeongbokgung Palace



● Scientific Examination of Uigwe Manuscripts at the Kyujanggak Institute for Korean Studies



● Survey of Hanji Production Processes by Intangible Cultural Heritage Artisans at the Municipal and Provincial Levels



Short Video: Field Survey of Palace Wallpaper Hanji



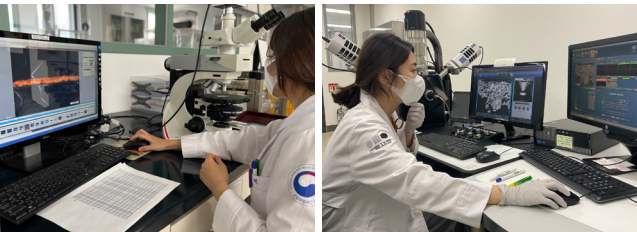
● Proposal Document for Establishing KS Standard for Hanji

Research on Traditional Dancheong Pigments

Dancheong is the distinctive decorative painting found on traditional Korean architecture. Industrialization replaced its natural pigments with synthetic ones, disrupting traditional production and application techniques and hindering the authentic use of Dancheong in national heritage restoration. To address this issue, the research project aims to restore traditional Dancheong pigment manufacturing techniques, improve pigment quality, and establish an academic foundation to enable on-site supply and application of traditional pigments. This involved not only identifying the materials used in traditional Dancheong pigments, but also analyzing existing samples of Dancheong paintings to establish a scientific basis for their painting techniques and preservation properties. Research on Dancheong painting characteristics and techniques is conducted by color group. So far, scientific analyses have been completed for red, yellow, and white pigments, followed by green and blue. To ensure the continued use of traditional Dancheong pigments, researchers have secured a variety of eco-friendly natural resources from Korea and are studying their applicability as coloring materials for Dancheong. This research has led to the creation of a scientific database on the material characteristics of white, red, and now yellow Dancheong pigments, categorized by raw material type. A particularly noteworthy achievement is the patenting of the traditional method for producing dongrok pigment—used to recreate the distinctive lotus-leaf green color in Dancheong—which was later transferred to a private company for practical application. This demonstrates how traditional materials research can play a leading role in revitalizing related industries. Additionally, the establishment of quality standards for traditional Dancheong pigments has enabled the official implementation of the traditional materials certification system. This has contributed significantly to identifying the authenticity of traditional pigments and improving quality control.



Promotional Video: Technology Transfer of Dongrok Pigment



● Analysis of Traditional Dancheong Pigment Samples



- 1. Survey and Collection of Yellow Dancheong Pigment Raw Minerals (Yellow soil from Mudeungsan, Gwangju)
- 2. Material Characterization of Manufactured Yellow Pigments (e.g., opacity)
- 3. On-site Guidance for Technology Transfer of Traditional Dancheong Pigment Techniques to Private Company
- 4. Commemorative Photo of Technology Transfer of Traditional Dancheong Pigment Techniques
- 5. Promotion of Technology Transfer for Traditional Dongrok Pigment (Heritage Korea 2024)

Research on Traditional Lacquer (Otchil)

Lacquer (ot) has long been used in Korea as a traditional material for coating and adhesion in crafts, household items, and architecture. However, material-based research to preserve the traditional authenticity of lacquer and promote its continued use has been lacking. Before launching a full-scale research initiative, a two-year pilot project was conducted to gather foundational data on lacquer, including analysis of historical texts and current research trends. Based on historical documents from the Joseon Dynasty, the study examined the terminology and significance of otchil, shifts in production sites and trade, and the materials and techniques used in lacquerware making. It also included an analysis of domestic and international research trends, analytical methods, and case studies on artifact analysis. The results were compiled into a report, and the original texts were made publicly accessible.



● Report on Historical Documents and Research Materials on Lacquerware from the Joseon Dynasty



# Scientific Analysis of Materials Used in Painted Cultural Heritage

Kim So-jin

Researcher, Conservation Science Division

**The Scientific Analysis of Materials Used in Painted Cultural Heritage project is designed to accumulate information necessary for the restoration and conservation of Large Buddhist hanging scroll (*gwaebul*) through scientific investigation and analysis. It also aims to uncover the academic and artistic value of non-designated cultural heritage. In addition, the project provides internal and external analysis support services, including qualitative and quantitative analyses of excavated artifacts such as metals and glass.**


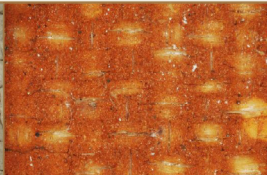




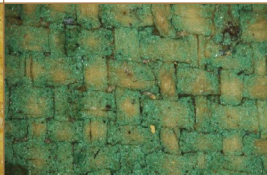

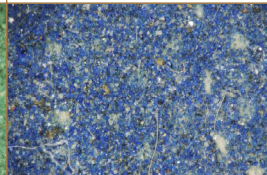
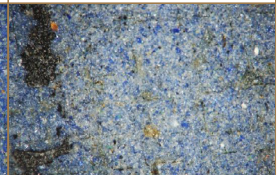
Large Buddhist hanging scrolls were created for major outdoor Buddhist rituals such as Yeongsanjae, Suryukjae, and Yesujae. Approximately 120 of these works were produced from the 17th century to 1945. They are notable for their massive size, typically around 10 meters long and 6 to 7 meters wide. Due to their size and weight, these artworks are difficult to move and pose challenges in terms of preservation and management. To address this, the NRICH conducted the “Precision Survey Project for Large Buddhist hanging scrolls” in partnership with the *Seongbo Research Institute of Cultural Heritage* from 2015 to 2024. Over this 10-year period, the materials used for coloring and support in 64 Large Buddhist hanging scrolls were surveyed and analyzed. In 2024, the project examined five hanging scrolls designated as Treasures or National Treasures: the

Buddhist Hanging Painting of Cheongnyangsang Mountain (Treasure), the Hanging Scroll of Yugasa Temple in Dalseong (Treasure), the Hanging Painting of Yongmunsa Temple, Namhae (Treasure), the Hanging Painting of Ssanggyesa Temple, Hadong (Treasure), and the Hanging Painting of Muryangsa Temple (Maitreya Buddha) (National Treasure).

The investigations were divided into non-destructive surveys and precision analyses. Non-destructive methods used portable microscopes, hand-held X-ray fluorescence (XRF) analyzers, hand-held Raman spectrometers, and UV-visible spectrometers. For precision analysis, small flaked samples were analyzed using X-ray diffraction (XRD) to identify crystal structures. Before all testing, reproducibility checks of equipment were conducted to ensure reliability. Complementary tools were used to enhance the credibility of results.

The combined results revealed the following pigments (or dyes) used in the 64 Large Buddhist hanging scrolls:

The following pigments were used by color: for white, lead white (yeonbaek); for black, ink stick (meok) and indigo (niram); for red, cinnabar (jinsa), minium (yeondan), and seokganju; for yellow, orpiment (deunghwang) and realgar (seokhwang); for green, copper chloride and malachite (gongjakseok); and for blue, indigo (jjok), azurite (seokcheong), and smalt (hoecheong).

Pigments Used in Large Buddhist hanging scrolls:				
				
Lead white	Minium	Cinnabar (mixed with red lead)	Seokganju	Orpiment (yellow over red)
				
Gamboge (yellow over lead white)	Malachite	Copper chloride	Azurite	Smalt (mixed with lead white)

Notably, lead white, red lead, cinnabar, and copper chloride were consistently used from 1622, the earliest known period of large Buddhist painting production. Malachite became more frequently used from the 1720s. Talc also saw increased use from the 1750s, while orpiment—commonly used in earlier works—declined in later periods.

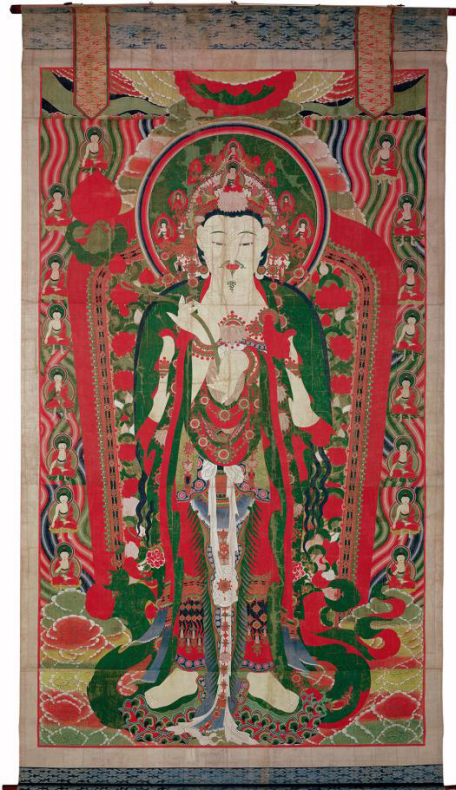
Large Buddhist hanging scrolls were created by joining multiple fabric panels to form a single image.

Surface and fiber (side and cross-sectional) analysis of 64 such paintings showed that 36 were made with hemp fabric, 16 with silk, and 3 with paper as the base material. Eight paintings used a combination of hemp and silk, or silk and blended-weave fabrics. A particularly unique case is the Hanging Painting of Muryangsa Temple, which, unlike other scrolls joined vertically, was assembled from five horizontally connected sections.

Textile Materials Used in Large Buddhist hanging scrolls:	
	
Silk (main)	Fine silk
	
Coarse silk	Hemp

Through this research project, foundational data for the preservation and restoration of Large Buddhist hanging scrolls was secured, ensuring preparedness against potential damage or loss of the originals. The project also contributed to expanding cultural heritage designation and management by highlighting the academic and artistic value of these works. As a result of scientific investigation, nine Large Buddhist hanging scrolls whose value was recognized have been designated as Treasures. In particular, the Hanging Painting of Muryangsa Temple (Maitreya Buddha), which was included in the 2024 study, has been elevated to National Treasure status, and the Hanging Painting of Yugasa Temple in Dalseong has been designated as a Treasure.

The research findings are available in the *Large Buddhist Painting Precision Survey Reports* on the NRICH website. High-resolution images of the paintings can be viewed in the “Cultural Heritage Zoom” section of the “National Heritage Knowledge Link” on the NRICH website.



● “Hanging Painting of Muryangsa Temple (Maitreya Buddha)”  
Elevated to National Treasure Status



● Hanging Painting of Yugasa Temple in Dalseong  
Designated as a Treasure



# Korean Cultural Heritage Reaches the World

## Preview of International Events in 2025

Han Ji-sun  
Researcher, Planning and Coordination Division



Participants in CollAsia

### August 5 (Tue) / Celebrating 20 Years of ACPSC: Toward New International Cooperation

This year marks the 20th anniversary of the Asia Cooperation Program on Conservation Science (ACPCS). The ACPSC program invites trainees from across Asia to Korea for education in cultural heritage preservation and restoration. To date, it has produced 120 graduates from 19 countries.

On August 5, four former international participants will be invited back to the Institute for a special talk concert, where future directions for the program—including its expansion beyond Asia to a global audience—will be discussed.



Participants in CollAsia



Participants in the OTTP  
(On-site Technical Training Program)

### August 6 (Wed) / World Archaeology Conference

On August 6, the third World Archaeology conference will be held in partnership with ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property, under UNESCO). This upcoming event at the Seoul President Hotel will feature renowned researchers from Korea and abroad, who will present a range of findings on invaluable cultural heritage unearthed from historical refuse. The event is also open to the general public.

### October 27 (Mon) / Fostering Global Cultural Heritage Researchers with ICCROM

Beginning October 27, a three-week program, CollAsia (Conservation and Use of Southeast Asian Collections), will be co-hosted with ICCROM. Launched in 2012, CollAsia provides training to cultural heritage professionals in the Asia-Pacific region to enhance their knowledge and skills in conservation, management, and emergency response. Since 2023, the program has been jointly operated with NRICH. This year, the program will take place in Tashkent and Samarkand, Uzbekistan.

### November 11 (Tue) / Commemorating 60 Years of Korea–Japan Diplomatic Normalization

To celebrate the 60th anniversary of Korea–Japan diplomatic normalization, the Institute will host a joint event with Japanese research institutions with whom it has collaborated for up to 40 years.

Representatives from the Fukuoka Board of Education, Nara National Research Institute for Cultural Properties, and the Nara Prefectural Kashihara Archaeological Institute will be invited to participate in an academic conference titled, “Reflections and Prospects for Korea–Japan Cultural Heritage Exchange,” held at Convention Hall C of the ICC Hotel in Daejeon. On the following day, Wednesday, November 12, a special academic symposium will be held at the same venue to commemorate the 20th anniversary of joint research between the Nara Prefectural Kashihara Archaeological Institute and NRICH’s Archaeological Heritage Division.

#### Event Schedule

#### “Home Coming Day” to Celebrate the 20th Anniversary of ACPSC

Date | August 5 (Tue), 13:00 - 17:00  
Venue | NRICH, Daejeon  
Details | Mentor–mentee talk concert and commemorative ceremony

#### Academic Conference on the World Heritage Nomination of Mahan Archeological Site in Jeollanam-do

Date | September 25 (Thu) - 26 (Fri), 10:00 - 17:00  
Venue | 70th Anniversary Memorial Hall, Mokpo National University  
Details | Discussion of the Outstanding Universal Value of the Mahan Heritage Sites in Jeollanam-do and their distinctiveness through comparative World Heritage analysis

#### Academic Symposium Commemorating 20 Years of Joint Research with the Nara Prefectural Kashihara Archaeological Institute

Date | November 12 (Wed), 10:30 - 18:00      Venue | Convention Hall C, ICC Hotel, Daejeon  
Details | Presentations and discussions on the past and future of Korea–Japan cultural heritage exchange

#### International Academic Conference on “World Archaeology: Archaeology of Landfills”

Date | August 6 (Wed), 10:00 - 17:00  
Venue | President Hotel, Seoul  
Details | Presentations of archaeological research on waste from around the world

#### Academic Conference Commemorating the 60th Anniversary of Korea–Japan Diplomatic Normalization

Date | November 11 (Tue), 10:30 - 18:00  
Venue | Convention Hall C, ICC Hotel, Daejeon  
Details | Presentations and discussions on the past and future of Korea–Japan cultural heritage exchange



Participants in CollAsia

### December 8 (Mon) / Participation in the ICCROM General Assembly

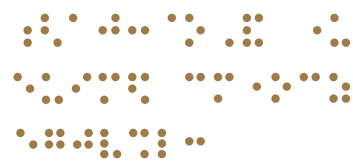
In 2023, Shin Ji-young, Director of the Conservation Science Research Division, was elected as a board member of ICCROM to represent Korea. Accordingly, Director Shin will attend the 101st and 102nd ICCROM Executive Board meetings and the 34th ICCROM General Assembly in Italy, where mid- to long-term strategies and next year’s projects will be reviewed and approved.





## Cultural Heritage Enjoyed by All Through Inclusive Technology

Kim You-kyoung  
Researcher, Planning and Coordination Division



The phrase "Cultural Heritage Enjoyed by All Through Inclusive Technology" was also printed in braille.

## Heritage Korea 2025

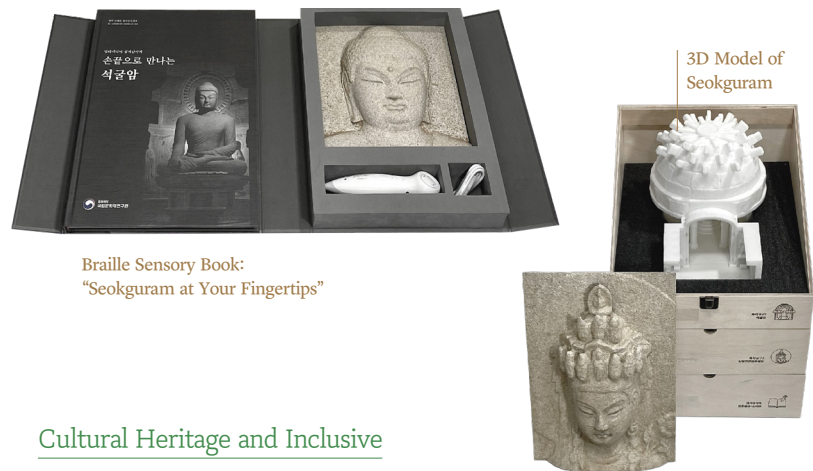
"Heritage Korea 2025," offering a look into the present and future of the cultural heritage industry, was held from June 12 to 14 at the Hwabaek International Convention Center (HICO) in Gyeongju. Under the theme "Cultural Heritage Enjoyed by All Through Inclusive Technology," the NRICH hosted an exhibition and a talk concert, introducing inclusive technologies developed through its projects, including braille sensory books, tactile learning tools, and AI-powered sound pens.



Heritage Stories Read by Touch  
and Told by Sound

Since 2020, over a five-year period, the NRICH has developed six types of braille sensory books and tactile tools through its project “Heritage Stories Read by Touch and Told by Sound.” The braille sensory books, which incorporate braille into illustrations and photographs, are a pioneering attempt to enable visually impaired individuals to understand cultural heritage through touch, helping them expand their imagination. To capture the detail of the images, the size of the braille dots was adjusted across three levels, and a special technique called “water-drop braille printing” was applied to prevent peeling with high-strength adhesion. Another highlight was the “AI voice-activated pen experience.” This device uses AI to generate voices from 20-minute recorded text, allowing sentences in the books to be heard in the voices of celebrities and national athletes.

Visitors could also directly interact with tactile models such as “Seokguram at Your Fingertips” and “Representative Architectural Heritage of Korea,” experiencing cultural heritage in a vivid and hands-on way.



Braille Sensory Book:  
“Seokguram at Your Fingertips”

3D Model of  
Seokguram

Cultural Heritage and Inclusive  
Technology TALK with Ambassador Fabien

On the second day of the Expo, the NRICH hosted a special talk event titled “Cultural Heritage and Inclusive Technology TALK with Fabien” on the main stage of the exhibition hall. Fabien, the Institute’s ambassador, served as host, while experts from various fields who participated in the braille project joined as panelists. Together, they shared reflections and achievements, making it a meaningful and insightful occasion. Director-General Lim Jong-deock remarked, “Cultural heritage belongs to everyone. This project began with the belief that people with visual impairments should also be able to experience it firsthand.” Jo Hang-tae, CEO of Jeil Special Planning, led the project from initial planning through the application of braille printing technology. He stated, “We wanted people to feel cultural heritage not with their eyes, but with their hands,” emphasizing the project’s intention to go beyond delivering information by designing a multi-sensory experience.

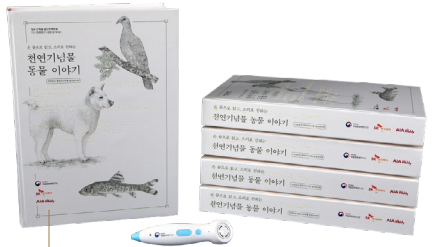


Kim Ji-min, Senior Researcher at NeoLAB Convergence, who oversaw the development of the talking pen, shared that participating in the project reminded her of her late father, who was visually impaired. She added that knowing this book would have brought him great joy made her feel even more responsible and fulfilled as a technologist. Fabien, the host of the talk concert, concluded the event by saying, “This project felt especially meaningful because it showed that technology can be people-centered, and cultural heritage can truly be for everyone.”

Technology for People,  
Cultural Heritage for All

The braille sensory books, talking pens, and tactile learning tools introduced in this exhibition are symbols of “inclusive technology”—designed to help everyone experience cultural heritage more widely and deeply. They represent a practical model for a new way of enjoying cultural heritage. Through this expo, the NRICH showcased the achievements of its “Braille Project” and highlighted “inclusive technologies.” The talk concert also spotlighted the sincerity behind the technology development and the significance of collaboration through the voices of those directly involved. In particular, this project—carried out in cooperation with national institutions, private companies, experts, and citizens—reflects the growing movement toward a shared approach that allows everyone to enjoy cultural heritage together.

Thanks to the technologies, content, and the spirit of heartfelt collaboration showcased at this expo, we are one step closer to realizing the vision of “Cultural Heritage for All.” The NRICH will continue its research and technological innovation to ensure that everyone can experience and engage with cultural heritage.



Braille Sensory Book  
“Stories of Natural Monuments  
and Animals Told Through Touch and Sound”





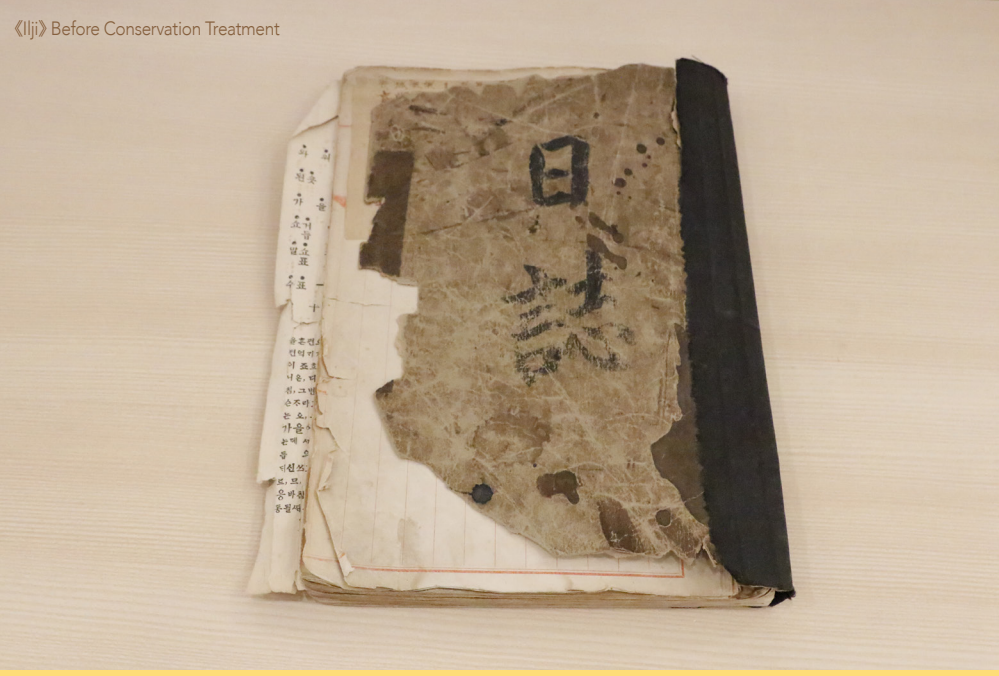
# Embossing the Light of Words in Braille— So They May Be Read Without Sight

Conserving the Creation Records of  
Korean Braille *Hunmaengjeongeum*

A wish for one person’s words to be read  
even in the dark—*Hunmaengjeongeum* was  
a compassionate science born from the desire  
to give everyone the gift of literacy.

Jeong Hee-won  
Researcher, Cultural Heritage Conservation Science Center

《Ilji》 Before Conservation Treatment



《Ilji》 After Conservation Treatment



The Cultural Heritage Conservation Science Center in the NRICH has completed conservation treatment for the “*Ilji*” and “*Maengsa Ilji*”, which are part of “Creation and Dissemination of Korean Braille *Hunmaengjeongeum*.”, National Registered Cultural Heritage. These documents are invaluable historical records left by Park Du-seong, who led the development and spread of the Korean Braille, including a loan certificate for a braille typewriter, a membership recruitment notice for the Blind Association, newspaper articles, and other documents compiled in the form of a scrapbook. Damaged covers, metal bindings, and missing pages were treated using scientific analysis, deacidification, and other conservation techniques. After treatment, the artifacts were returned to their original repository, the Songam Braille Library, where they will be used for exhibition. The effort toward “*writings that everyone can read*” continues today through the conservation of these historic records.



# Wooden Cultural Heritage: How Should We Protect It?

Kim Si-hyun

Researcher, Restoration Technology Division



Termite experts from Korea, the United States, and Taiwan came together to explore strategies for preventing and controlling termite damage to wooden cultural heritage. This was the focus of the “2025 NRICH Seminar: Areawide termite control and invasive termite” hosted by the NRICH. As termite damage continues to rise due to climate change and the introduction of invasive termites, the seminar provided a timely opportunity for global experts to share insights and preservation strategies.

The Restoration Technology Division of the NRICH hosted the “2025 International Termite Expert Invitation Program” over five days from March 18 to 22. This program was organized to acquire overseas termite control technologies and establish international networks by inviting foreign termite experts for joint seminars and on-site consultations. Participants included Assistant Director Dr. Carrie Cottone and Research Entomologist, Dr. Mark Janowiecki, from the City of New Orleans Mosquito, Termite and Rodent Control Board, U.S., as well as Professor, Dr. Hou-Feng Li from the Department of Entomology at National Chung Hsing University, Taiwan. A joint seminar was held at NRICH in Daejeon, followed by on-site inspections and consultations at wooden cultural heritage sites in Seoul, Daejeon, and Nonsan.

## From Assessing the Situation to Developing Solutions

The “2025 NRICH Seminar: Areawide termite control and invasive termite” centered on three main components: a closed roundtable discussion for termite control researchers and officials, a public academic symposium, and joint field investigations at key termite-affected wooden cultural heritage sites in Korea. The roundtable, held in a conference room at the Conservation Science Center, brought together 15 participants, including the three invited experts, interpreters, officials from the Cultural Heritage Service’s Disaster Prevention Division, and staff from NRICH’s Restoration Division. The session began with a presentation by NRICH researcher Kim Si-hyun, who outlined the current state of termite damage in Korea and ongoing research efforts. A Q&A session followed, focusing on termite ecology and control strategies. The public symposium, held in the auditorium of the Analytical Science Center, drew approximately 120 participants—including over 50 NRICH and KHS staff and around 70 professionals and representatives from



“Termite damage to Korea’s wooden cultural heritage is occurring nationwide and may worsen due to climate change and the introduction of invasive termite species. It is essential to introduce new control technologies and apply spatial termite management methods to prevent damage before it occurs.”

— Kim Si-hyun,  
Research Officer, NRICH

“The French Quarter of New Orleans is a historic district where French, Spanish, and American cultures intersect. The area has suffered widespread damage from Formosan termites. Lessons learned through the Operation Full Stop program continue to be applied to this day, as we work to keep termite populations at consistently low levels.”

— Dr. Carrie Cottone, Assistant director,  
City of New Orleans Mosquito, Termite  
and Rodent Control Board, U.S.

related industries. Over the course of five hours, five presentations were delivered, followed by in-depth discussions. The first presentation was delivered by Kim Si-hyun of NRICH, who introduced major domestic termite species and their characteristics, current cases of termite damage to wooden cultural heritage, existing control methods, and ongoing research. The second and third presentations were given by Assistant Director Dr. Carrie Cottone and Research Entomologist, Dr. Mark Janowiecki, respectively. Their presentations focused on the introduction of Formosan subterranean termites to New Orleans, spatial termite control strategies applied in large historic districts like the French Quarter, characteristics of invasive species, case studies from the United States, and future mitigation approaches.



Lee Jae-hyun, a doctoral student at Gyeongsang National University, and Professor Lee Won-hoon presented on the distribution of native termite species in Korea and the potential introduction of invasive termite species. The final speaker was Professor, Dr. Hou-Feng Li. The seminar concluded with Professor Lee’s presentation on termite species distribution in Taiwan, major pest species, key control methods, and public engagement programs. The entire seminar was streamed live on the NRICH YouTube channel. Meanwhile, on-site inspections of termite damage to wooden cultural heritage sites in Korea were conducted at Suun-gyo in Daejeon, Nogang Seowon and Donam Seowon in Nonsan, and at the restoration sites of Changdeokgung Palace and Jongmyo’s Main Hall in Seoul. The inspections focused on patterns of termite damage to wooden heritage architecture in Korea, current termite control research by the NRICH Restoration Division, and future management strategies.



This is all the more important given the increasing termite damage already observed across many heritage sites, highlighting the need for constant preventative control. Termite-related economic losses are severe in countries like the U.S., Japan, China, Australia, and across Southeast Asia.

For example, after the complete removal of Formosan termite colonies at Louis Armstrong Park in New Orleans (adjacent to the French Quarter), activity rebounded within five years—an instructive case that highlights the importance of sustained control efforts in areas already affected by termite infestations. In the U.S., it took nearly 20 years after the initial introduction of Formosan termites to fully recognize the extent of their spread and damage. By then, complete eradication was found to be practically impossible. The termite control efforts in New Orleans’ French Quarter are considered a leading example of spatial termite management, demonstrating that termite density was successfully reduced during the 1998–2012 period and could be sustainably maintained thereafter.

However, the project also revealed limitations: some properties opted out of treatment, and winged termites from outside the treatment zones continued to migrate in. As a result, complete eradication proved

“Global trade and climate change have greatly increased the potential for invasive termites to spread to new countries. After World War II, Formosan termites entered the U.S. mainland. They are now present in several states, causing significant damage. Once these termites become established, total eradication is nearly impossible. Continuous monitoring is essential.”

— Research Entomologist, Dr. Mark Janowiecki, City of New Orleans Mosquito, Termite and Rodent Control Board, U.S.

unfeasible, and maintaining low termite density emerged as a more realistic goal.

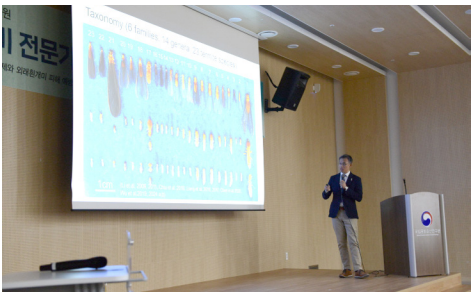


**The Need for Wood Treatment and Monitoring Systems**

To manage numerous wooden structures across wide areas, it is essential to reduce the cost and time required per building. In the U.S., highly durable in-ground and above-ground baiting systems have significantly contributed to effective and economical termite control and are now widely used. A survey conducted about a decade after the end of Operation Full Stop revealed that approximately 50% of wooden buildings in the French Quarter are now privately managed for termite control. This shift is largely due to greater awareness and understanding of the

importance of termite prevention. The detection of invasive termites strongly correlates with trade volume. Most invasive species share three characteristics: They feed on wood; they nest inside their food source; and they develop secondary reproductions.

However, the recent detection of *Nastitermes* in the U.S.—despite lacking some of these characteristics—has drawn attention, as it shows that invasive species can naturalize even without fulfilling all three conditions.



“Nationwide termite collection and genetic analysis have clarified species distribution across Korea. The recent discovery of invasive termite species not previously found in the country highlights the need for a coordinated, multi-agency response.”

— Lee Jae-hyun (PhD candidate), Professor. Lee Won-hoon, Gyeongsang National University

“Most termites serve an important ecological function as decomposers, though certain species act as pests and cause serious damage. Effective mitigation is only possible through the combined efforts of citizens, professionals, and researchers.”

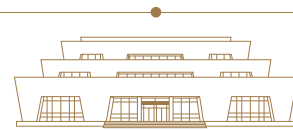
— Professor, Dr. Hou-Feng Li, National Chung Hsing University, Taiwan



Professor, Dr. Hou-Feng Li emphasized the importance of wood maintenance and establishing termite management systems, while Assistant Director Dr. Carrie Cottone highlighted the need for spatial termite control and the tailored application of various bait formulations to suit each heritage site. By bringing together termite experts from Korea, the United States, and Taiwan, the seminar provided valuable insights into global research trends in termite control. It is expected to have a positive impact on shaping NRICH’s future research direction and contribute to more effective responses to the growing threat of termite damage driven by climate change.







Reading History in Iron, Experiencing Heritage by Hand

# Jungwon National Research Institute of Cultural Heritage

Lee Sol-eon

Researcher, Jungwon National Research Institute of Cultural Heritage

Chungju, historically known as “Jungwon-gyeong,” has long been recognized as one of Korea’s three major iron-producing regions.

Here in Chungju stands the Jungwon NRICH, offering a window into the rich history and legacy of Jungwon culture.

The institute features a permanent exhibition on “ironworking technology,” offering a glimpse into the long history of “iron,” from ancient times to the modern era, as well as a hands-on excavation experience area—providing rare access to cultural heritage fieldwork.





A Place Where Jungwon’s History and Heritage Converge

Chungju, often called the center of both waterways and mountain routes—and by extension, the heart of the Korean Peninsula—has long been known as “Jungwon-gyeong.” It is a region that embodies the spirit of Goguryeo, which once dominated the Manchurian plains, the brilliant culture of Baekje that flourished in defiance of great powers, and the proud legacy of Silla, which unified the Three Kingdoms. Chungju has also been recognized as one of Korea’s top three iron-producing regions, with iron playing a pivotal role in the mass production of weapons and farming tools. This strategic advantage has long been a source of pride and identity for the region.

Situated on land where a brilliant history lives on, Jungwon NRICH has served since its establishment in December 2007 as a central research institution for the Jungwon Historical and Cultural Region, encompassing Chungcheongbuk-do and Gangwon-do. Through academic investigations and research on cultural heritage, it sheds light on the historical significance of the region’s culture. Particularly active are its studies of “ironworking technologies” and “transportation routes,” both key aspects of Jungwon culture.

The exhibition hall is one of the institute’s most notable spaces. Designed as an open venue for public engagement, it conveys the message of “connecting the past to the present.” Under the theme “In Search of Jungwon Culture at the Crossroads of the Three Kingdoms,” the exhibition showcases the cultural characteristics of Mahan, Baekje, Goguryeo, and Silla, as well as Chungju’s signature ironworking technologies and results from a five-year excavation of the Gulsansa Temple Site in Gangneung.



All About “Iron” — From Antiquity to Modern Times

One of the most notable features of the exhibition is the “Ironworking Technology” section, which offers a vivid glimpse into Chungju’s rich legacy as one of “Korea’s three major iron-producing regions.” Abundant in iron since ancient times, Chungju has long been a key site for iron mining, with iron regarded as one of the most essential materials from antiquity to the modern era.

To produce the iron we use today, several key steps—mining, smelting, casting, and forging—must be undertaken. These processes are brought to life through a carefully designed diorama that welcomes visitors. Artifacts such as tuyères (air-blowing pipes) and hammers, excavated from actual sites, are also on display, offering deeper insight into ancient iron production.

In the institute’s outdoor exhibition space, visitors can view full-scale models of smelting furnaces relocated from archaeological sites, along with furnaces used in experimental research on ancient ironworking—adding depth and realism to the experience. At the heart of this exhibition is the institute’s focus on accessibility. “The public often perceives cultural heritage as difficult and distant,” said Lee Sol-eon. “That’s why the primary goal of this space is to communicate its value in a way that’s easy to understand.” He added, “We hope the exhibition will spark greater interest in Jungwon culture and the heritage of the Chungju region.”



How Children Can Discover Cultural Heritage at Their Level

In addition to its permanent exhibition hall, Jungwon NRICH offers several hands-on learning spaces, including a Children’s Excavation Experience Zone. Notably, “the Children’s Excavation Experience Zone,” designed for children under the age of 11, features a full program—from 3D video screenings to excavation activities and artifact restoration. The excavation area, in particular, is a popular educational play space where children can learn about history by unearthing mock artifacts buried in hinoki cypress cubes. During the artifact restoration activity, children get to touch real artifacts or piece together broken ones, experiencing the process of bringing cultural artifacts back to their original form.

Lastly, the model-building activity of “the Seven-Story Stone Pagoda of Tappyeong-ni”—one of Chungju’s most iconic heritage sites—has received an enthusiastic response from children.

Lee Sol-eon remarked, “The Children’s Excavation Experience Zone offers a valuable opportunity for future generations to appreciate the value of cultural heritage and gain a hands-on sense of what a career in archaeology entails. I hope that programs like this help naturally convey the institute’s role and significance to the public.”

Lee Sol-eon, Jungwon NRICH



“I want to share the culture of Jungwon—simply and engagingly.”

**Q. Please briefly introduce yourself.**  
**A.** Hello, I’m Lee Sol-eon from Jungwon NRICH. I’ve been working here since September 2021, now in my fourth year. My main responsibilities include conducting archaeological excavations, publishing research reports, and supporting cultural heritage policies in the Jungwon Historical and Cultural Region. I focus especially on highlighting the historical importance of Jungwon as a hub of inland transportation, and I’m involved in studies across various areas such as fortress sites, Buddhist temples, and relay stations.

**Q. What advice would you give to visitors to enhance their experience of the exhibition?**  
**A.** Rather than just “viewing” the displays, I recommend approaching the exhibit with a mindset of understanding the broader context of Jungwon culture—it makes the experience much more engaging. For instance, asking questions like “Why did the Three Kingdoms vie for control of this region?” or “How did their cultures differ?” can help you gain a deeper appreciation of the historical significance of Jungwon culture.

**Q. Could you recommend some nearby attractions or places worth visiting around the institute?**  
**A.** The institute is located within Tangeum Park in Chungju. The park features family-friendly spots like “Chungju Larva Land,” a maze garden, playgrounds, and open lawns for picnicking. Nearby are the Han River and the Tangeumdae Scenic Site, historically significant as the place where Ureuk, the legendary gayageum master, once played, and where General Shin Rip fought a major battle during the Imjin War. A visit here offers a well-rounded experience of Chungju’s cultural richness and natural beauty.



# Explore National Heritage from Your Textbooks

## Public Access Service to NRICH’s Archival Records

To share with the general public a wealth of research materials produced at cultural heritage sites, the NRICH, a national institution dedicated to cultural heritage research, operates the “Public Archive Service for National Heritage in Textbooks.” Since its launch in November 2023, the service has recorded approximately 30,861 downloads to date.

Purpose of Use (Unit: number of cases)

Academic Papers	Academic Presentations	Education	Exhibitions	Commercial Publications	Broadcasting	Advertising	Web Content	Cultural Product Development	Other	Total
1,851	868	15,123	628	425	3	0	3,878	201	7,884	30,861

### Development Process

Public interest in NRICH’s research records—such as excavation site documentation, measured drawings, artifact cards, and historical photos—has steadily increased, with growing demand from academia, education, and the media. Notably, in the Research Projects the Public Wants from NRICH in 2024 survey, the top-ranked project was “Providing Cultural Heritage Research Records Linked to School Textbooks”, highlighting its public relevance and raising high expectations.

This also highlighted the need for public services that convey accurate history through textbook-linked content—an essential role for NRICH as a national institution dedicated to cultural heritage research.

To that end, NRICH curated research materials related to familiar heritage sites featured in elementary, middle, and high school textbooks, selecting over 200 key records covering 31 national heritage sites found in 21 textbooks published in 20 volumes. Numerous advisory meetings (2023–2024) were held to reflect input from the education sector. Records with strong classroom relevance—such as materials from the Japanese colonial period, excavation photos, artifact cards, and restoration drawings—were carefully selected. All content is downloadable in high quality without copyright restrictions, ensuring accessibility and ease of use.

Users can search for cultural heritage by school level and textbook unit, and download individual images or entire sets. Additionally, analog-format records such as photographs, film, slides, and paper-based materials (drawings, rubbings, artifact treatment cards) were digitized in high resolution to improve access and satisfaction through proactive, tailored content delivery.

Baek Ju-hyun  
Researcher, Digital Heritage Team



Tomb of King Muryeong, 1971



Panoramic View of Mireuksa Temple Site in Iksan (circa 1970s)



Excavated Artifact from Mireuksa Temple Site: Chimi (Roof Ridge Ornament)

...  
Sotong 24 Survey Conducted: April 8–18, 2024  
(Respondents) 288 members of the general public  
(Survey Topic) Selection of the Most Anticipated Research Projects Among 15 Initiatives

### User Satisfaction

In 2024, NRICH participated in Korea’s largest education fair, “the EDU+WEEK 2024 Future Education Expo,” introducing the website to a wide audience, including teachers and students. A user survey conducted with 790 participants who explored the “National Heritage in Textbooks” content revealed that 95% of general users expressed a willingness to revisit the site, while 98% of education professionals found it highly useful and said they would use it frequently. Since launching the online service, user satisfaction has averaged 4.8 out of 5, and the site has recorded over 30,000 cumulative visits to date.

### User Satisfaction Results

General users willing to revisit

95.0%

Parent A

“My child loves learning about cultural heritage, and this site is a great find. Thank you!”

Visitor B

“There’s a lot of great material here. It would be even better if there were a feature to find heritage sites near me.”

Visitor C

“It’s been difficult to find resources on actual excavation processes during career exploration related to heritage. This is exactly what I needed for my project.”

Education professionals willing to revisit

98.1%

Teacher A

“I used the site in a recent lesson. It was helpful because the students could explore the content directly.”

Teacher B

“If I had known about this site a little earlier, it would’ve made my teaching much easier. I don’t know why such a great resource hasn’t been more widely promoted.”

Educational Publisher C

“Dealing with copyright issues for publications is always tough, but I was amazed to learn that these materials can be freely used with proper attribution. I’ll definitely make use of them.”

### Looking Ahead

Some of the research records disclosed through “National Heritage in Textbooks” have already been included in the 7th National Curriculum textbooks as of 2024—specifically in two middle school history books (History II) and one high school textbook (Korean History).

Going forward, more content will be made available through subject expansion (e.g., Korean language, science, art, and social studies), and NRICH plans to actively support the use of these materials in educational settings—such as classrooms and teaching aids—through close collaboration with local education offices and governments.

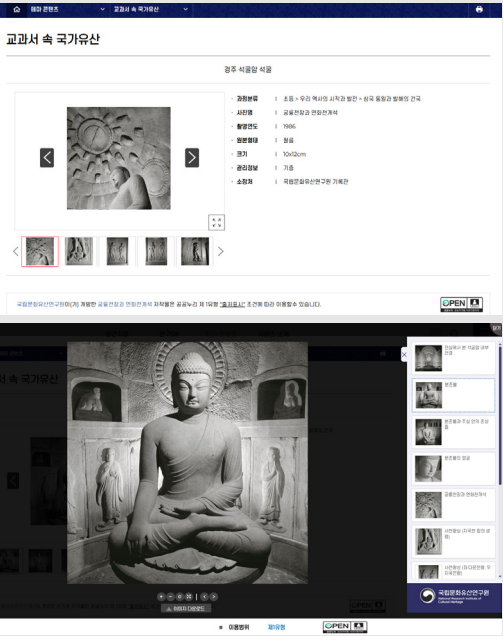
We hope that the “National Heritage in Textbooks” content provided by NRICH will be widely used as an educational resource to address the lack of awareness about cultural heritage and respond to historical distortions by neighboring countries.

\* “National Heritage in Textbooks” offers high-quality, digitized content on familiar national heritage sites featured in school textbooks. This tailored service is easily accessible to all users and is available under the “National Heritage in Textbooks” section in the Thematic Content menu on the *National Heritage Knowledge Link Portal*—NRICH’s academic research and information service website.

...  
2024 EDU+WEEK Future Education Expo: August 8 - 10, 2024 | COEX, 1F Hall A  
Participants: 27,578

### Website Overview

National Heritage in Textbooks <https://portal.nrich.go.kr>

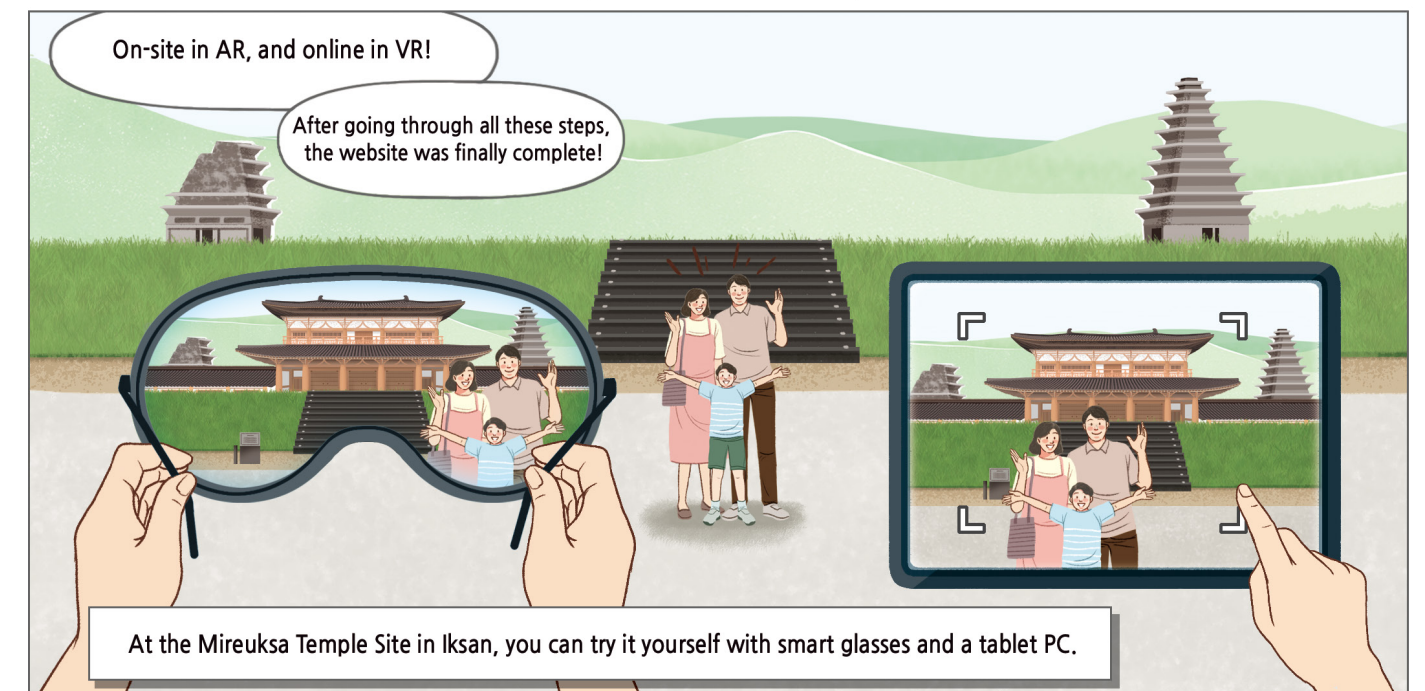
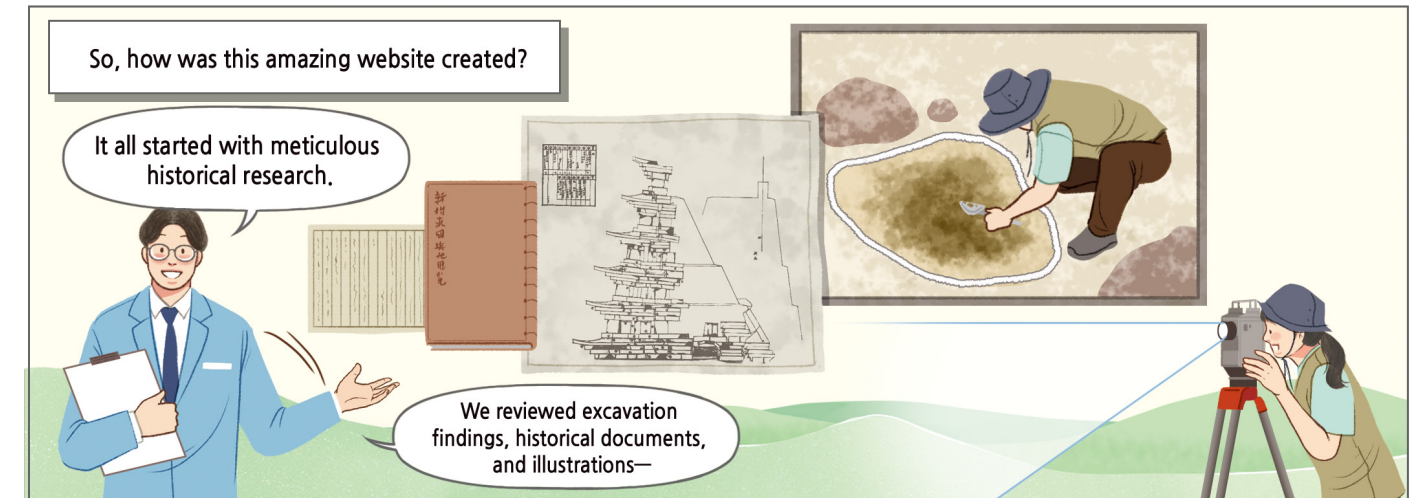
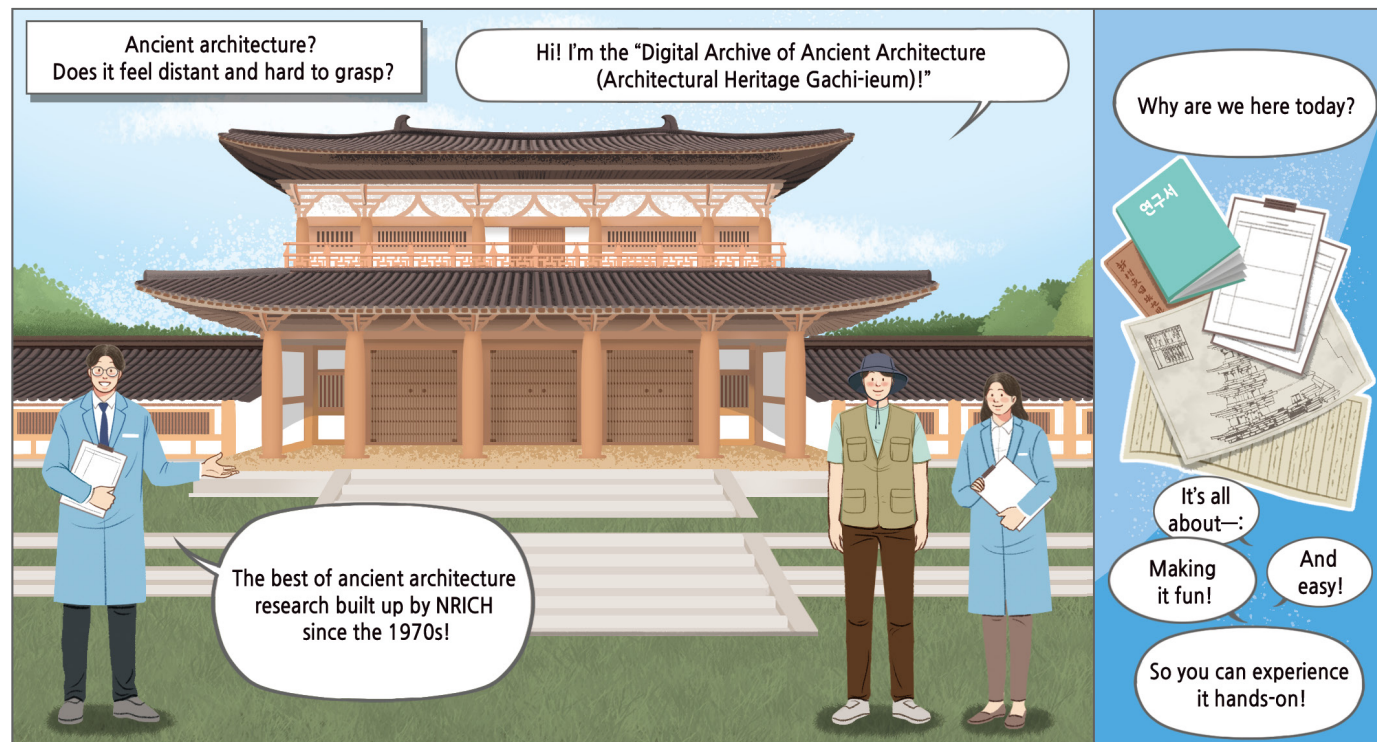




# A Digital Gateway to Ancient Architecture

The NRICH launches a new digital platform dedicated to ancient architecture—featuring research archives compiled since the 1970s!

Choi Hyang-seon  
Researcher, Architectural Heritage Division  
Illustration Byeori









## Goryeo Customs Captured in a Pomegranate-Shaped Celadon Ewer

Park Ji-young  
Senior Researcher, Artistic Heritage Division



Celadon Pomegranate-shaped Ewer  
(靑磁 石榴形 注子,  
Celadon Pomegranate-shaped Ewer),  
Height: 18.3cm, National Museum of Korea  
(Photo source: e-Museum)

Celadon wares modeled after specific objects are known as *sanghyeong cheongja*, or figurative celadon. These typically take the form of auspicious animals, plants, or human figures. Rather than simply aiming for aesthetic beauty, these figurative celadons were designed to embody the symbolic meanings of their motifs. For that reason, examining the significance of each form offers fascinating insights.



During the Goryeo dynasty, a wide variety of figurative celadons were produced, among which the pomegranate-shaped ewer stands out as a particularly unique example. Pomegranates are not widely cultivated in Korea even today and are primarily imported from Central Asia. It is said that pomegranates were introduced to China during the Tang dynasty from Anshi, a region corresponding to present-day Persia, and were considered a rare delicacy in Goryeo as well. Why, then, would artisans model an ewer after a fruit so rarely seen in Korea? And for what purpose was it used?

This celadon ewer resembles four plump pomegranates stacked atop a dish. The round, split-open fruit is decorated with white clay dots to represent seeds, with leaves attached to enhance the naturalistic effect. The handle and spout were crafted in the form of stylized pomegranate branches—an extraordinary design not found in other periods or countries.

With its abundant seeds enclosed in a round, full fruit, the pomegranate has long symbolized fertility and prosperity. In Buddhism, it also signifies the unbroken continuity and flourishing of the Dharma. Moreover, the pomegranate was closely tied to Taoist customs practiced during the Goryeo period. Though Goryeo was a Buddhist state, King Yejong (r. 1105–1122) even attempted to make Taoism the state religion, illustrating the significant influence of Taoism during the period.

Taoist belief held that the human body contained “three corpse spirits” (*samsichung*), parasitic entities that would leave the body on the night of *Gyeongsinil* (a specific day in the sexagenary cycle) while the person



slept, to report their sins to the celestial emperor (*Sangje*). It was believed that the emperor would then adjust the person’s lifespan based on these reports, prompting the tradition of *sugyeongsin*—staying awake through the night of *Gyeongsinil*.

The *Goryeosa* (History of Goryeo) records that even King Chungnyeol (r. 1274–1308), while still crown prince, participated in *sugyeongsin* ceremonies in the palace. These nighttime feasts, where people drank and celebrated all night, were considered not just a custom but a state ritual and prevailing social trend.

According to the *Bencao Gangmu* (Compendium of Materia Medica), Taoist texts referred to the pomegranate as “Three Corpse Wine” (*samsiju*), because the corpse spirits would become intoxicated when they consumed it. Sweet pomegranates were especially believed to suppress the spirits, preventing them from leaving the body. Thus, a pomegranate-shaped ewer would have been an ideal vessel for holding liquor at *sugyeongsin* feasts meant to protect against spiritual harm. The ewer holds over 0.8 liters—more than two bottles of today’s soju. The topmost pomegranate is slightly open, designed to make pouring liquids easier. This celadon ewer, created at the intersection of Taoist belief and drinking culture, is a prime example of Goryeo material culture that blends meaning with function.

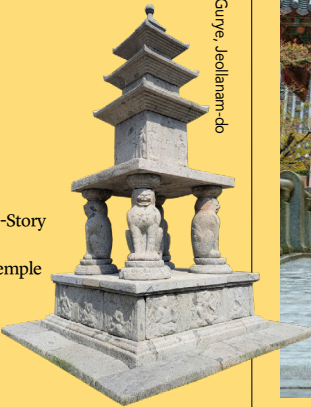
Though the custom of *sugyeongsin* has disappeared and is nearly forgotten, the pomegranate-shaped celadon ewer continues to carry the cultural and ritual legacy of Goryeo to us today.



# Where Dramas Linger : Walking Through Time with Cultural Heritage



Ildu House  
Joseon Dynasty  
9 parcels / 4,905㎡



Four-Lion Three-Story  
Stone Pagoda  
of Hwaeomsa Temple  
Unified Silla Period  
Height: 5.5m  
National Treasure



1 Drama *The Queen Who Crowns* | Gurye, Jeollanam-do

2 Drama *The Tale of Lady Ok* | Hamyang-gun, Gyeongsangnam-do



## Cultural Heritage that Holds Stories

Some scenes from dramas linger in our memory.  
Stories unfolding in serene landscapes, framed by  
blue mountains and aged roof tiles.  
Such spaces evoke a desire to pause and dwell,  
if only briefly, outside the flow of everyday life.

There are those who revisit the filming  
locations to relive the emotions of their  
favorite scenes.  
This article introduces cultural heritage  
sites that appeared in recent popular  
historical dramas and served as their  
filming locations.



3 Drama *Mr. Sunshine* | Seosan, Chungcheongnam-do & Andong, Gyeongsangbuk-do



## Hwaeomsa and Cheoneunsa Temples in Gurye: The Secret Stage of the Drama *The Queen Who Crowns*

The recently aired historical drama *The Queen Who Crowns* centers on the life of Queen Wonkyeong, who rose to power alongside King Taejong Yi Bang-won, the third monarch of the Joseon Dynasty. The drama's captivating backdrop also drew significant attention, with Hwaeomsa and Cheoneunsa Temples in Gurye, Jeollanam-do, at its heart. The majestic temple scenes blended with nature that appear in Episode 10 were filmed at Hwaeomsa, while other locations including Saseongam Hermitage, Ssangsanjae House, and Cheoneunsa were used to enrich the show's tone and atmosphere. Hwaeomsa itself is a treasure trove of cultural heritage. The temple houses numerous National Treasures, including the Four-Lion Three-Story Stone Pagoda, Gakhwangjeon Hall, Hanging Painting of Hwaeomsa Temple (The Vulture Peak Assembly), the Wooden Seated Vairocana Buddha Triad of Hwaeomsa Temple in Gurye, and Stone Lantern at Gakhwangjeon Hall of Hwaeomsa Temple, Gurye, among others.



Stone Lantern at  
Gakhwangjeon  
Hall of Hwaeomsa  
Temple, Gurye  
Unified Silla period  
Height: 6.4m

📍 **Hwaeomsa Temple, Gurye**  
539 Hwaeomsa-ro, Masan-myeon,  
Gurye-gun, Jeollanam-do  
Admission: Free  
Inquiries: +82-61-783-7600

📍 **Cheoneunsa Temple, Jirisan**  
209 Nogodan-ro, Gwangui-myeon,  
Gurye-gun, Jeollanam-do  
Hours: Mon, Wed-Sun 11:00-16:30  
Closed every Tuesday  
Admission: Free  
Inquiries: +82-61-781-4800

Another filming location, Cheoneunsa, was founded in the third year of King Heungdeok of Unified Silla (828 CE) and today consists of more than 20 buildings. The Geungnakbojeon Hall and its Hanging Scroll Behind the Amitabha Buddha are considered invaluable examples of late-Joseon temple architecture and Buddhist art. After touring the temple, take a walk along the “Gurye Temple Meditation Trail,” which follows the ridgeline of Mount Jirisan. As you walk the path once taken by monks, you'll find your mind naturally calming—offering a moment of deep reflection away from the routines of daily life.



Hanging Scroll Behind the Amitabha Buddha  
in Geungnakjeon Hall of Cheoneunsa Temple



A Stage for a Survival Scam: Travel Back in Time at a Joseon-Era Hanok  
Time Travel with *The Tale of Lady Ok* and Ildu House in Hamyang

One of the most talked-about recent historical dramas is *The Tale of Lady Ok*. This gripping tale of survival tells the story of Ok Tae-young, an outsider with a fake name, identity, and husband, and Cheon Seung-hwi, an entertainer who risks his life to protect her. It unfolds a fierce account of a female servant’s fight to survive and a man’s profound love for her.

As the drama rose in popularity, its filming locations also gained attention and soon became tourist attractions.

A prime example is Ildu House in Hamyang, Gyeongsangnam-do—a site where the history of the Joseon Dynasty still lives and breathes.

Located in Gaepyeong Village, a 500-year-old clan village of the Hadong Jeong and Pungcheon Noh families, the house showcases the upper-class architecture of the Joseon period—complete with a *sotdae-mun* (ceremonial gate), commemorative plaques, *sarangchae* (men’s quarters), *anchae* (women’s quarters), and *haengnangchae* (servants’ quarters). In 2013, it was designated a luxury traditional house, with some areas now open for overnight stays.

The surrounding area is ideal for year-round hiking and valley exploration, with well-known mountains such as Daebongsan (1,227m), Gibaeksan, Geumwonsan, and Hwangseoksan nearby.

For those seeking even higher peaks, Jirisan is just a short trip away.



📍 **Ildu House, Hamyang**  
50-13 Gaepyeong-gil, Jigok-myeon,  
Hamyang-gun, Gyeongsangnam-do  
Opening Hours: Apr–Nov 09:00–18:00 /  
Dec–Mar 09:00–17:00  
Inquiries: +82-55-962-7077



Haemieupseong Walled Town in Seosan



Manhyujeong Pavilion in Andong

A Journey Through Time —  
Relive the Magic of *Mr. Sunshine*  
at Haemieupseong and Manhyujeong

📍 **Manhyujeong Pavilion**  
42 Mukgyehari-gil Giran-myeon, Andong-si,  
Gyeongsangbuk-do  
Opening Hours: 09:30–17:30  
Admission: Adults KRW 2,000 / Children KRW 1,000  
Inquiries: +82-50-807-5333

📍 **Dosanseowon Confucian Academy**  
154 Dosanseowon-gil Dosan-myeon, Andong-si,  
Gyeongsangbuk-do  
Opening Hours: Feb–Oct 09:00–18:00 /  
Nov–Jan 09:00–17:00  
Admission: Adults KRW 2,000 / Children KRW 1,000  
Inquiries: +82-54-856-1073

📍 **Nakgangmulgil Park**  
423 Sanga-dong, Andong-si, Gyeongsangbuk-do  
Opening Hours: Year-round  
Admission: Free  
Inquiries: +82-54-850-4203

📍 **Haemieupseong Walled Town, Seosan**  
143 Nammun 2-ro, Haemi-myeon, Seosan-si,  
Chungcheongnam-do  
Opening Hours: Mar–Oct 05:00–21:00 /  
Dec–Feb 06:00–19:00  
Admission: Free  
Inquiries: +82-41-661-8005

📍 **Gaesimsa Temple**  
321-86 Gaesimsa-ro, Unsan-myeon, Seosan-si,  
Chungcheongnam-do  
Opening Hours: Year-round  
Admission: Free  
Inquiries: +82-41-688-2256

The 2018 historical drama *Mr. Sunshine* left a lasting impression and continues to resonate with audiences to this day. Centered on a young boy who, after being taken to the U.S. during the 1871 Shinmiyangyo (U.S. expedition to Korea), returns to Joseon, the drama interweaves themes of love and historical trauma. Its breathtaking filming locations also played a vital role in its popularity.

Among the many featured locations, two particularly stand out: Haemieupseong Walled Town in Seosan, Chungcheongnam-do and Manhyujeong Pavilion in Andong, Gyeongsangbuk-do.

Manhyujeong gained fame as the romantic backdrop for the lead couple’s love scene in Episode 6. The quiet pavilion nestled in nature was designated a National Cultural Heritage Site in 2011. It recently drew renewed attention after emerging unscathed from a major wildfire.

Haemieupseong Walled Town, featured in the training scenes of Joseon soldiers, was constructed between the 17th year of King Taejong’s reign and the 3rd year of King Sejong’s reign. With its 4.9-meter-high stone walls and peaceful walking trails, the fortress vividly conveys Joseon’s military traditions and way of life.

While in Andong, consider visiting Dosanseowon Confucian Academy and Nakgangmulgil Park, and in Seosan, make time for Ganworam Hermitage, Gaesimsa Temple, and the Rock-Carved Buddha Triad.

Nakgangmulgil Park





## A Different Perspective from Busosanseong

Interview with Japanese Researcher Kurosawa Hikari



Excavations are currently underway at Busosanseong Fortress (Historic Site), located in Buyeo and known as the rear mountain fortress of Sabi—the last capital of Baekje. The work is led by the Buyeo NRICH. What drew special attention this time was the participation of a young researcher from the Nara Prefectural Kashihara Archaeological Institute in Japan.

To mark the 20th anniversary of academic exchange between the NRICH and the Kashihara Institute, we spoke with Kurosawa Hikari, who is currently taking part in the joint fieldwork and experiencing the significance of Korea-Japan cooperation firsthand.

**Q1** Hello. We understand you work at the Nara Prefectural Kashihara Archaeological Institute. Could you briefly introduce yourself—your area of study, responsibilities, research interests, and academic focus?

Hello. I'm Kurosawa Hikari from the Nara Prefectural Kashihara Archaeological Institute in Japan. My research focuses on tombs from Japan's Kofun period. The size, shape, burial methods, and grave goods of these tombs evolved over time. I believe these changes reflect how people of that era perceived death and expressed their beliefs through

rituals. Currently, I'm working to reconstruct burial ceremonies of the time by studying burial structures and pottery used as grave goods.

**Q2** We understand you've been participating in the excavation of Busosanseong Fortress in Buyeo since May. What sparked your interest in Korean national heritage, especially Baekje-era architecture? Could you also tell us what led to your involvement in this particular excavation?

At our institute, we conduct excavations and research focused on the Asuka region (modern-day Asuka Village), which was the political center during Japan's Asuka period.

This region includes many archaeological sites showing strong connections with Baekje, making it extremely important for understanding the formation of Japan's ancient state and international exchanges of the time. Two years ago, I participated in an excavation of what is presumed to be the Asuka Palace site.

Through that experience, I came to realize that to gain a deeper understanding of the Asuka region, I needed to study more about the archaeological sites and artifacts of the Korean Peninsula.



Q3 Could you tell us more specifically about your current role in the excavation at Busosanseong Fortress and your plans going forward?

Fortress, I'm primarily responsible for measuring and recording structural remains. In the field, I try not to simply carry out tasks but also to carefully observe the site's location and surrounding environment—details that can only be understood through excavation. I also hope to learn from Korea's fieldwork methodologies and apply those insights to future excavations and research in Japan.

Q4 What are your thoughts on the future direction of cultural heritage exchange between Korea and Japan? What do you hope to gain from participating in this fieldwork?

The year 2025 marks the 20th anniversary of the academic exchange program between the NRICH and the Nara Prefectural Kashihara Archaeological Institute. I feel very honored to be here at such a meaningful time and would like to express my sincere gratitude to all the Korean colleagues who have sustained this exchange over the years. Since the beginning of this collaboration, many senior researchers have visited one another, and the relationships and joint research outcomes built through this process are truly invaluable. I hope these exchanges will continue and that archaeological research into Korean cultural heritage will further develop through new and diverse perspectives.



Q5 As an archaeologist, which aspects or types of Korean heritage are you personally most interested in? Please also tell us why.

As my specialty is the Kofun period, I have a strong interest in the sites and artifacts of the Three Kingdoms period in Korea. During my stay, I've visited several heritage sites and was often surprised by how much the features and layout of sites differ by region. In particular, when it comes to tombs, I found it very meaningful to encounter artifacts and burial structures that differed from what I had learned through documents or prior research. Since Japan's kofun culture is believed to have been influenced by the Korean Peninsula and the continent, I believe it's essential to compare and study the sites and artifacts of both countries. I would like to continue this line of investigation going forward.

Q6 Lastly, is there anything you would like to say or any message you'd like to share with the NRICH researchers working alongside you at Busosanseong?

I was very nervous at first, but I'm thankful that the members of the excavation team—many of whom are around my age—were so kind and welcoming. Although my Korean is still limited, I hope to continue learning and growing through this excavation experience. I look forward to working with you all!

# Cultural Heritage: Piece Together the Fragments of Memory

Do the cultural heritage sites in the photos below look familiar? If you've read the NRICH newsletter, you're sure to remember! The answers are hidden in the pages of this issue.

**Q.1**  
**Where were these artifacts discovered?**

A. Ancient Tombs in Songsan-ri, Gongju  
B. Archeological Site in Bonghwang-dong, Gimhae  
C. Buyeo Royal Tombs

**Q.2**  
**Which location served as a filming site for the drama *Lady Ok*?**

A. Haemieupseong Walled Town, Seosan  
B. Hwaeomsa Temple, Gurye  
C. Ildu House, Hamyang

**Q.3**  
**Which fruit inspired the shape of the celadon piece on the left?**

A. Pomegranate  
B. Grape  
C. Apple

## How to Participate

Participants who answer all questions correctly will be entered into a draw to receive a designated commemorative gift.  
How to enter: Submit your answers via email to NRICH at [nrich@korea.kr](mailto:nrich@korea.kr)



• National Research Institute of Cultural Heritage •

## Joint Hosting of the 2025 *Türkiye–Hittite* International Conference



On April 18, the National Research Institute of Cultural Heritage (NRICH), in collaboration with the Embassy of Türkiye in Korea, the Seoul Baekje Museum, and the National Museum of Gimhae, co-hosted the **2025 Türkiye–Hittite International Conference** at the Seoul Baekje Museum. This symposium was held in conjunction with the 2025 international special exhibition *Hittites: The Mightiest Empire of the Ancient Orient*, and focused on archaeological findings from the Hittite capital Hattusa, the second capital Ortaköy (Şapinuwa), and Baekje capital city ruins on the Korean Peninsula. Eleven archaeological experts from Germany, Türkiye, and Korea presented six themed talks and participated in a comprehensive discussion. The symposium featured vivid case studies based on actual field excavation experience. NRICH aims to expand international cooperation in cultural heritage through this symposium and will continue to advance academic exchanges and research on ancient urban sites.

• National Research Institute of Cultural Heritage •

## Modern Architecture Heritage Tour “Heritage Open House” Held



On April 26, NRICH hosted the “Heritage Open House,” a guided field tour program of five modern architectural heritage sites in Daejeon registered as National Heritage. As part of its research into modern architectural repair techniques, the event was organized to share the historical value and preservation practices of architectural heritage with both the general public and architecture students. Participants toured the sites with expert commentary and had the rare opportunity to observe repair processes and preservation methods firsthand. Sites visited included the Former Daejeon Branch of the Oriental Development Company, Daeheungdong Cathedral, and the Temiorae complex, among others. Registration was conducted on a first-come, first-served basis via the Korea National Trust website. NRICH plans to continue expanding public engagement with cultural heritage through diverse programs like this.

• National Research Institute of Cultural Heritage •

## “2025 Cultural Heritage Analysis and Research Colloquium” Held

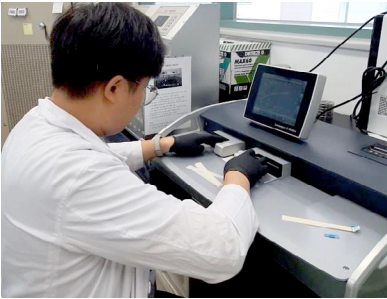


The NRICH is hosting the “2025 Cultural Heritage Analysis and Research Colloquium” at the Analytical Science Center in Daejeon on the last Thursday of each month at 2:00 PM from April to October. This colloquium is designed to share the latest technologies in cultural heritage analysis and case studies in conservation and restoration. It features a total of six sessions with lectures and discussions on topics such as paleoenvironmental research, digital conservation science, and the convergence of traditional techniques. The event is open to both researchers and the general public through on-site registration. NRICH will continue to promote the value of cultural heritage through science and technology.

**Session 4** August 28 (Thu) **Session 5** September 25 (Thu) **Session 6** October 30 (Thu)

• National Research Institute of Cultural Heritage •

## Patent Registered for New Analytical Method for Hanji Properties



NRICH has announced the successful registration of a patent for a method to scientifically assess the quality of traditional Hanji (Korean handmade paper), specifically a “wet tensile strength testing method.” This marks the second Hanji-related patent, following the “tear resistance testing method” registered in 2023. The newly patented method involves immersing wet Hanji for a fixed period and measuring its tensile strength to evaluate its quality. It can be used to determine the suitability of Hanji for cultural heritage restoration. The research was conducted as part of the “Study on the Properties and Applicability of Traditional Materials” project. NRICH plans to expand Hanji’s applications and pursue international standardization in collaboration with relevant institutions.



### Key Events at NRICH in 2025

Academic Conference

#### Memory of Water, History of Hanseong

Date | July 17 (Thu)

Venue | National Palace Museum of Korea, Seoul

- Held in commemoration of the 100th anniversary of the discovery of Pungnapdoseong, the event shares the historical value of Hanseong-era capitals, reviews academic progress, and explores future research directions

Culture Program

#### Sungmundae Humanities Series, Sessions 4–6

Date | Sessions 4: Sep 10 (Wed), Sessions 5: Oct 15 (Wed), Sessions 6: Nov 12 (Wed)

Venue | Sungmundae Auditorium

Academic Forum

#### Tree Rings, Records of Time:

##### Wolseong and East Asian Paleoclimate Research

Date | July 23 (Wed)

Venue | Lahan Select Gyeongju

- A forum to share and expand paleoclimate research centered on Wolseong in Gyeongju and its connection to broader East Asian studies.

Academic Forum

#### Dialogues on Silla, Sessions 3 & 4

Date | Sessions 3: Sep 25 (Thu), Sessions 4: Nov 27 (Thu)

Venue | Pomme de Pain, Gyeongju

Cultural Program

#### Gaya History Citizen Academy, Sessions 5–8

Date | Sessions 5: Jul 30 (Wed), Sessions 6: Aug 27 (Wed), Sessions 7: Sep 24 (Wed), Sessions 8: Oct 29 (Wed)

Venue | Auditorium, Gaya National Center of History & Culture



### Key Events at NRICH (September)

Academic Conference

#### Preservation and Management of Stone Cultural Heritage of Joseon Royal Mausoleums and Tombs (working title)

Date | Sep 9 (Tue)

Venue | National Palace Museum Auditorium

- Sharing the current preservation status and discussing management strategies for the stone cultural heritage of Joseon royal mausoleums and tombs

Academic Conference

#### Conference on the Societal Structure and Culture of Mahan

Date | Sep 11 (Thu) – Sep 12 (Fri)

Venue | Naju NRICH

- An academic review of Mahan’s culture and societal structure from archaeological and documentary-historical perspectives

Education Program

#### [Citizen Lecture] Our Story of Jungwon (2H2025)

Date | Sep 23 (Tue)

Venue | Seonjam Café (Chilgeum-dong, Chungju)

- A public program exploring the history and heritage of the Jungwon region

Academic Conference

#### Academic Symposium on the Archaeological Site in Bonghwang-dong in Gimhae

Date | Sep 25 (Thu)

Venue | Gaya History & Culture Center (Gimhae)

- Presentation of research findings and review of ongoing investigations at the Archaeological Site in Bonghwang-dong in Gimhae



• Gyeongju National Research Institute of Cultural Heritage •

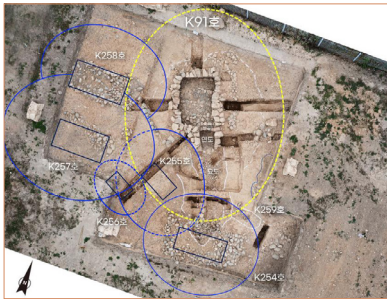
## MOU Signed for the Study of Ancient Animal Bones Excavated from Heritage Sites



On April 2, the Gyeongju NRICH signed a joint research agreement with the National Park Institute for Wildlife Conservation regarding the study of ancient animal bones excavated from the moat at Gyeongju Wolseong Palace Site. This agreement aims to identify the academic value of animal remains uncovered during archaeological excavations and to strengthen preservation and research systems. The two institutions will collaborate on investigations and analyses of ancient animals, sample sharing, documentation, and strategies for data utilization. In 2020, the excavation at the moat of Wolseong Palace Site unearthed various animal bones, including those of bears. These remains are considered important for understanding the ecology of ancient animals and their relationship with humans. Notably, this joint research is expected to help trace the historical distribution of the endangered Asiatic black bear (moon bear) and contribute to the broader study of biodiversity on the Korean Peninsula.

• Gyeongju National Research Institute of Cultural Heritage •

## First Stone Chamber Tomb Discovered at the Jjoksaem Site, Used for Five Burials in a Unique Structure



On May 30, the Gyeongju NRICH, in collaboration with Dongguk University WISE Campus, held a public presentation at the Jjoksaem site to share recent excavation findings. This research is the sixth result of a joint investigation that began in 2020, aimed at shedding light on the funerary practices of Silla's ruling elite. The stone chamber tomb labeled K91, newly confirmed in the Jjoksaem area, featured a unique internal structure used for a total of five burials along with grave goods. Excavated artifacts include gold earrings, gilt-bronze belt ornaments, barbed iron weapons (mineulsoe), and earthenware, offering important insights into the evolution of burial practices and the relationships between social groups in ancient Silla society. Nearby tomb J230, a wooden chamber tomb, is estimated to date to the late 4th century and contained iron weapons and jars as grave goods.

• Gaya National Research Institute of Cultural Heritage •

## Large Cache of Luxury Lacquerware Ritual Vessels Unearthed at Archaeological Site in Bonghwang-dong, Gimhae



The Gaya NRICH announced on March 24 the discovery of over 300 wooden artifacts, including 15 top-grade lacquerware ritual vessels dating to the 1st century CE, during its 10th excavation of the Archaeological Site in Bonghwang-dong in Gimhae. The lacquered ritual vessels are remarkably delicate, with necks measuring just 1 cm in diameter. Visible traces of lathe-turning indicate the advanced level of early woodworking techniques. The organic layer yielded not only lacquerware, but also bird-shaped wooden figures, utilitarian wooden utensils, loom components, and divination tools. This is the first time such a large number of lacquerware ritual items have been excavated from a residential site, as they were previously known only as grave goods. The finding is seen as strong evidence that the Archaeological Site in Bonghwang-dong, Gimhae functioned as the political center of the powerful Byeonhan state as early as the 1st century.

• Buyeo National Research Institute of Cultural Heritage •

## Major Embanked Terraces and Building Sites Identified at Eastern Military Warehouse Area of Busosanseong Fortress



On May 29, the Buyeo NRICH held a briefing session at the excavation site to present the findings from the 17th excavation of Busosanseong Fortress in Buyeo. The excavation targeted the fortress's largest flat terrace. The team identified a three-tiered embanked platform constructed using traditional Baekje methods, with features including buildings with upright posts, storage facilities, and a tile-based foundation structure. A highlight was the discovery of Korea's first east-west aligned tile retaining wall—a 26-meter-long structure composed of over 20 stacked layers of roof tiles. The findings confirm that the interior of Busosanseong Fortress served not just a defensive function but also as a core royal palace site of Baekje. The remains provide important evidence of Baekje's architectural hierarchy and traditional construction techniques.



### Key Events at NRICH (September–October)

#### Academic Conference

#### Academic Conference on the World Heritage Designation of Mahan Sites in Jeollanam-do (working title)

Date | Sep 25 (Thu) – Sep 26 (Fri)

Venue | Mokpo National University 70th Anniversary Hall

- Establishing the Outstanding Universal Value of Mahan sites in Jeollanam-do and examining their uniqueness through global heritage comparisons

#### Ceremony

#### 20th Anniversary of the Naju National Research Institute of Cultural Heritage

Date | Oct 17 (Fri)

Venue | Naju NRICH

- Commemorative event for the 20th anniversary of the Naju institute
- Program to feature activities involving large earthenware jars (ongwan)

#### Academic Conference

#### Restoration of the Royal Tombs Landscape in Buyeo and Future Directions (international conference)

Date | Oct 29 (Wed)

Venue | Sabimaru, Buyeo National Museum

- Sharing findings from the landscape restoration study of the Buyeo Royal Tombs

#### Workshop

#### Workshop on the Scientific Conservation of Modern and Contemporary Metal Cultural Heritage

Date | October (TBD)

Venue | Seminar Room, Cultural Heritage Conservation Science Center

- Sharing methods for scientific diagnosis and conservation of modern and contemporary metal heritage



### Key Events at NRICH (October–November)

#### Ceremony

#### New Discovery: The Bronze Offering Vessel of Heungnyunsa Temple (Working Title) – Exhibition Opening

Date | October (TBD)

- Special exhibition featuring the bronze utensils used to contain food offered to Buddha excavated in 2023

#### Ceremony

#### Restoration Ceremony for the Stone Lantern at Gakhwangjeon Hall of Hwaeomsa Temple (National Treasure)

Date | Early November (TBD)

Venue | Hwaeomsa Temple, Gurye, Jeollanam-do

- Commemorative event for the restored Stone Lantern at Gakhwangjeon Hall of Hwaeomsa Temple

#### Academic Conference

#### Climate Crisis and Cultural Heritage (Working Title) International Conference

Date | Nov 18 (Tue)

Venue | Ramada Hotel, Daejeon

- Sharing research on climate change response and risk-based management strategies for cultural heritage

#### Cultural Program

#### Open Demonstration: Experimental Reconstruction of Tomb No. 44 at Jjoksaem, Gyeongju

Date | November (TBD)

Venue | Jjoksaem Excavation Center, Gyeongju

- A public reconstruction event with commentary on the piled stone wooden chamber tomb, open to researchers, press, and the general public



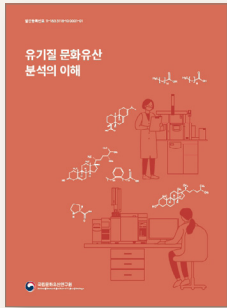
# NRICH Publications

## Documenting Cultural Heritage Through Books

The NRICH continues its research efforts to preserve the value of cultural heritage and prepare for the future. In the first half of 2025, the Institute published various reports and books that systematically organize the results of its investigations and studies. These records are available to the public via the NRICH's online platform, “National Heritage Knowledge Link.”



National Heritage knowledge Link



**NRICH**  
**Understanding the Analysis of Organic Cultural Heritage**  
A report that organizes the characteristics of materials and scientific research results of organic cultural heritage through domestic and international case studies.

Investigation and Research Report | 2024 | 193p



**NRICH**  
**Conservation Science Research, Vol. 46, No. 1**  
A scholarly journal encompassing the field of conservation science, featuring research findings on the preservation and restoration of cultural heritage, as well as the latest developments in conservation techniques.

Conservation Science Division | 2025 | 18×25.7cm | 59p



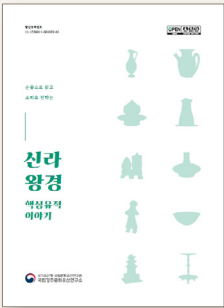
**NRICH**  
**Survey Report on Ancient Lacquerware and Research Materials**  
A comprehensive report on traditional lacquer—its terminology, techniques, and applications—based on Joseon-era documents and domestic and international research.

Investigation and Research Report | 2024 | 22.5×28.5cm | 200p



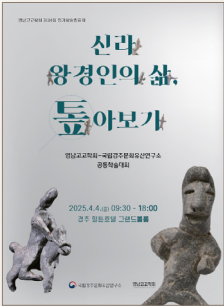
**NRICH**  
**2024 Survey Report on Biological Damage to National Designated Wooden Cultural Heritage (Vol. 1-4)**  
A report compiling the results of the 2024 biological damage survey conducted by the Restoration Technology Division on nationally designated wooden heritage.

Investigation and Research Report | 2025 | 22×28cm | Vol. 1: 466p, Vol. 2: 258p, Vol. 3: 290p, Vol. 4: 226p



**Gyeongju NRICH**  
**Reading with Fingers, Communicating with Sound: Key Sites of Silla's Royal Capital**  
A multimedia braille-tactile book presenting 14 major sites and key artifacts of the Silla capital in an accessible format for greater public engagement.

2024 | 26.7×38.4cm | 150p



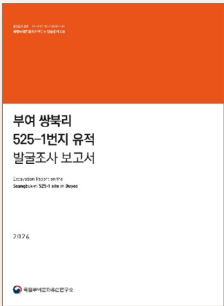
**Gyeongju NRICH**  
**Life in the Silla Capital: A Closer Look**  
Proceedings of the 34th Joint Academic Conference hosted by Gyeongju NRICH and the Yeongnam Archaeological Society on April 4, 2025.

Investigation and Research Report | 2025 | 27cm | 181p



**Gaya NRICH**  
**New Discoveries from the Bonghwang-dong Site: Lacquerware and Wooden Artifacts**  
A booklet introducing the artifacts unearthed from the Archaeological Site in Bonghwang-dong, Gimhae in 2025.

2025 | 21×29cm | 42p

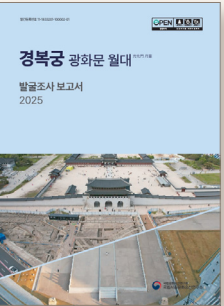


**Buyeo NRICH**  
**Excavation Report on the Site at 525-1 Ssangkuk-ri, Buyeo**  
A comprehensive report summarizing the site location, excavation results, unearthed artifacts, and urban structure of the 525-1 Ssangkuk-ri site in Buyeo.

Investigation and Research Report | 2024 | 30cm | 427p

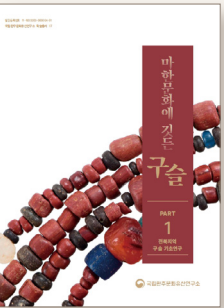


**Seoul NRICH**  
**The Secret Marble and the Guardians of Earthen Fortification in Pungnap-dong**  
A three-part children's historical fiction series set at Pungnap Fortress of Baekje, designed to convey the meaning of cultural heritage through engaging adventures.



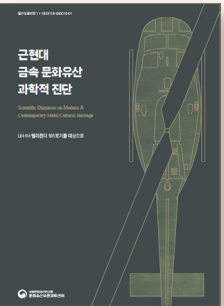
**Seoul NRICH**  
**Excavation Report on the Woldae of Gwanghwamun, Gyeongbokgung**  
A report detailing the findings from excavations conducted at the Gwanghwamun Woldae (stone terrace) between September 2022 and May 2023.

Investigation and Research Report | 2025 | 21.0×29.7cm | 208p



**Wanju NRICH**  
**Beads Embodying Mahan Culture, Vols. 1 & 2**  
A report compiling bead artifacts from Mahan cultural heritage sites in the Jeollabuk-do region.

Investigation and Research Report | 2024 | 22×28cm | Vol. 1: 312p, Vol. 2: 168p



**Heritage Conservation Science Center**  
**Scientific Diagnosis of Modern and Contemporary Metal Cultural Heritage**  
A report that supplements the findings of the 2023 “workshop on the scientific diagnosis of outdoor modern and contemporary metal heritage.”

Investigation and Research Report | 2024 | 22×28cm | 125p



# Introduction to Our YouTube Channel

## (First Half of the Year)



May 17, 2025, marked the first anniversary of the NRICH.. This commemorative video reflects on a year of progress and achievements, offering a meaningful look back at NRICH's journey and vision for the future.



Fabien, a TV personality and certified Level 1 Korean History expert, has been appointed as NRICH's ambassador! True to his status as a holder of the Level 1 Korean History Certificate, he actively took part in the research field as a one-day curator. From the appointment ceremony to hands-on activities, enjoy his cheerful day through this video.



Artifacts from the Archaeological Site in Bonghwang-dong in Gimhae  
The Gaya NRICH uncovered over 300 wooden artifacts—including 15 lacquered ritual vessels that reflect the authority of the Great Byeonhan power bloc—from the 1st century at the Archaeological Site in Bonghwang-dong in Gimhae. Catch the exciting moments of the excavation in this video.



An interactive activity where you create your own pop-up book of the Archaeological Site Gwanbuk-ri in Buyeo!  
This educational video offers a fun and engaging way to learn about cultural heritage—highly recommended for families and young viewers.

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Jungmun Gate of Mireuksa Temple Site: A Walk Through Time

EP. 1

미륵사지 중문의 의미

EP. 1 The Meaning of the Jungmun Gate at Mireuksa Temple Site

EP. 2

미륵사지 중원중문 기반 위

EP. 2 Jungmun Gate of Jungwon at Mireuksa Temple Site | Erected Anew on the Base

EP. 3

미륵사지 중원중문 평공포

EP. 3 Jungmun Gate of Jungwon at Mireuksa Temple Site | Bracket Structure Atop Columns Only (Pyeonggongpo Style)

EP. 4

미륵사지 중원중문 하안

EP. 4 Jungmun Gate of Jungwon at Mireuksa Temple Site | Cantilever Structure Analysis

EP. 5

미륵사지 동·서원 중문

EP. 5 Restoring the Middle Gates of Dongwon, Seowon and Jungwon at Mireuksa Temple Site | Twin Gates Facing East and West

EP. 6

미륵사지 석탑 시간을 세우다

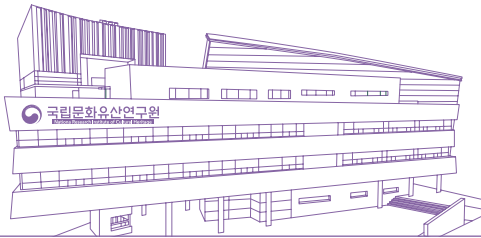
EP. 6 West Stone Pagoda at Mireuksa Temple Site | Rebuilding Time

A gate once stood at the heart of Baekje 1,400 years ago. Through historical research and restoration, it has been brought back to life. Explore the significance, structure, and restoration of the Jungmun Gate at Mireuksa Temple Site and Stone Pagoda in this video series. All six episodes are now available on YouTube.

Experience the profound meaning of Baekje architecture—like taking a quiet walk through time.



# How Much Do You Know About the NRICH?



Established in 1969 as the Cultural Heritage Research Office under Cultural Heritage Bureau of the Ministry of Culture and Information, the National Research Institute of Cultural Heritage (NRICH) has served for over half a century as Korea's leading institute dedicated to the investigation, research, preservation, and use of cultural heritage.

Official name of the National Research Institute of Cultural Heritage changed in Korean in 2024 in line with the government's transition to the National Heritage Administration system. Moving forward, NRICH will continue to protect the value of cultural heritage and build the future together with the public through scientific and systematic research.

**Excavation Surveys**  
Scientific investigations of underground archaeological sites

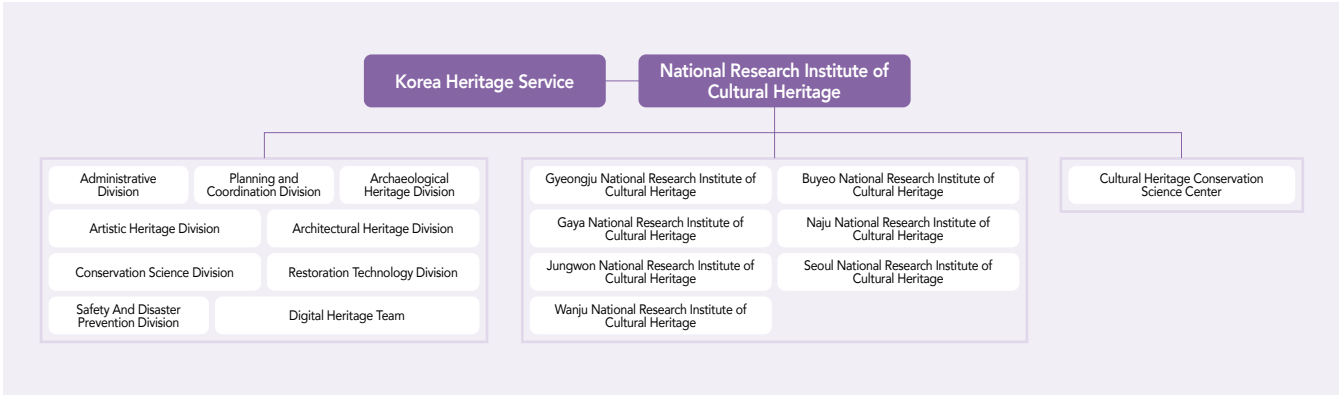
**Conservation Science**  
Analysis of damage and restoration of artifacts

**Digital Documentation**  
High-resolution 3D recording of cultural heritage

**International Cooperation**  
Global collaboration to strengthen preservation capacity

**Content Development**  
Creation of educational and experiential content

Organizational Structure of NRICH



#Scientific Research #International Cooperation #Professional Training #Public Engagement

The NRICH safeguards Korea's precious cultural heritage and shapes a shared future with the public.



Application Period

2025 6.13.~7.28.

Award Categories

Preservation and Management

Academic and Research

Service and Utilization

Field of national heritage preservation and management, and World Heritage inscription and management

Field of academic and scientific investigations into national heritage

Field of volunteerism, public use, promotion, and education related to national heritage

Required Documents

- One recommendation form (Foreign nationals must also submit an English recommendation letter and English CV)
- One consent form for government award
- One record of achievement form for government award candidates

Submission Method

In-person or by postal mail (Must arrive by 18:00 on the final day of the application period)

Inquiries: Policy Coordination Division, KHS (Tel: 042-481-4766~7)

Submission Address

Policy Coordination Division, Korea Heritage Service

Government Complex Daejeon, Bldg. 1

189 Cheongsu-ro, Seo-gu, Daejeon, Republic of Korea (Postal Code: 35208)

Form Downloads

Available on the Korea Heritage Service website (www.khs.go.kr → KHS News → Announcement)

Announcement of Awardees

Early December 2025 (individual notifications)

\* Applicants not selected will not be notified separately.

# 2025 National Heritage Preservation Merit Awards







National Research Institute of  
Cultural Heritage



 **YouTube**  
YouTube



*Instagram*  
Instagram



**NAVER**  
Naver Blog



**facebook**  
Facebook



**Threads**  
Threads



**X**  
X (Twitter)

Scan the QR code to visit the NRICH social media channels.





1



3



2



4



5



## Sharing Cultural Heritage in Our Neighborhood

Here are cherished photos submitted by readers who participated in the last issue's "Introduce the Cultural Heritage in Our Neighborhood" section.

Please check the list of selected participants below.

A small gift will be sent to each of the winners.

- 
1. Jo○○ (Gyeongju – Donggung Palace and Wolji Pond)
  2. Jeong○○ (Daejeon – Birthplace of Danjae Shin Chae-ho)
  3. Jeong○○ (Seoul – Seolleung and Jeongneung Royal Tombs)
  4. Bang○○ (Seoul – Hyoryeong Culture Center)
  5. Lee○○ (Seoul – Memorial Tower)

To.

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From.

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Newsletter