

HIGHLIGHTING
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JAPAN'S HEALING FORESTS
<PART 1>

CONTENTS

VOL. 192, MAY 2024



11

15



8

FEATURES

6 Why do People Relax when they Go to the Forest?

Interview with Miyazaki Yoshifumi, Emeritus Professor at the Nature Therapy Lab, Center for Environment, Health and Field Sciences, Chiba University

10 Enjoy a Walk in the Forests of Akan-Mashu National Park

Akan-Mashu National Park is a huge park located in the eastern part of Hokkaido. Introducing some interesting areas to walk around with in the park.

12 The Forests of Shirakami-Sanchi, Japan's First World Natural Heritage Site

Introducing a natural forest in Shirakami-Sanchi Mountains, the first registered UNESCO Natural World Heritage site in Japan

14 Bijinbayashi "Forest of Beauties" Enriching the Satoyama Landscape

Introducing Bijinbayashi, the picturesque beech forest that stretches across the *satoyama* landscape in Tokamachi City of southern Niigata Prefecture

16 The Birthplace of Shinrin-Yoku — A Cypress Forest with Trees Over 300 Years Old

Presenting Akasawa Natural Recreation Forest, home to over 300-year-old Japanese cypress trees and considered the birthplace of *shinrin-yoku*

18 Exploring 'Kumano Kodo,' a Forest-Enveloped World Cultural Heritage Site

Introducing Kumano Kodo, a forest-enveloped in the Kii Mountain Range, one of the rare pilgrimage routes on the UNESCO World Heritage List

20 The Shikoku Karst Tengu Highland Natural Recreational Forest: A Refreshing Corridor in the Sky

Presenting Tengu Highland Natural Recreational Forest located in the Shikoku Karst at an elevation of approximately 1,000 to 1,500 meters above sea level

22 The Kikuchi Gorge: Where Primeval and Clear Streams Meet

Introducing the charms of Kikuchi Gorge with forests of natural broad-leaved trees and alongside underground waters flowing from the outer rim the Mount Aso, creating a landscape rich in diversity.

31



25

ALSO

- 24 POLICY-RELATED NEWS**
Expo 2025 Osaka, Kansai, Japan
Designing Future Society for Our Lives
- 26 SCIENCE & TECHNOLOGY**
A Wooden “Dream Material” with
Outstanding Fire Resistance
- 28 DISCOVERING JAPAN THROUGH THE
EYES OF JAPANESE INFLUENCERS**
Art Inspired by the Seasons: Wagashi
- 30 TREASURES OF JAPANESE CULTURE**
The charm of Rakugo, having human
empathy and a laughter-filled Japanese
traditional storytelling art with a 400-year
history

BACK COVER

THE BEAUTY OF JAPANESE SWORDS

Long sword (tachi) signed Yasutsuna
(The celebrated Doujigiri Yasutsuna)

THEME FOR MAY: Japan’s Healing Forests <Part 1>

Japan is one of the most forested countries in the world, with approximately 70 percent of its land area covered by forest. There are many rich and diverse forests that have been nurtured over a long period of time. In Japan, the practice of relaxing in such a forest, away from the busy daily life, is called “*shinrin-yoku*” (forest bathing)*, and overseas it is also known as “*shinrin-yoku*” as the Japanese term implies. Actually, forest bathing has scientifically proven the relaxing effects. This issue of *Highlighting Japan* introduces readers to forest bathing based on scientific knowledge and some of Japan’s most famous forests, including the Akasawa Natural Recreation Forest in Nagano Prefecture, the birthplace of forest bathing, the Shirakami Sanchi Mountain Range, and the ancient pilgrimage routes of Kumano Kodo, as well as various initiatives that utilize forests.

* The Japanese term for “*shinrin-yoku*” is forest bathing. *Shinrin* means ‘forest’ and *Yoku* means ‘bath.’ *Shinrin-Yoku* literally means forest bathing, or ‘taking in the forest atmosphere’ for therapeutic results.



The beautiful straight, orderly beech trees of the well-maintained forest serve as a great place for forest bathing. (Bijinbayashi)

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FEATURES

Japan's Healing Forests

<Part 1>



From top:

A 400-year-old Japanese Beech tree — the symbol of the Shirakami-Sanchi Mountains

A pilgrimage route leading to three sacred sites known as Kumano Sanzan. The model in the photograph is wearing attire typical of upper-class ladies during the medieval period, often worn while traveling. (Kumano Kodo)

Yonjusanman Falls can be seen on the 'Mankitsu Course' (Kikuchi Gorge)

Shikoku no Michi (Shikoku Karst Tengu Highland Natural Recreational Forest)

Japan is one of the most forested countries in the world, with approximately 70 percent of its land area covered by forest. There are many rich and diverse forests that have been nurtured over a long period of time. In Japan, the practice of relaxing in such a forest, away from the busy daily life, is called “*shinrin-yoku*” (forest bathing)*, and overseas it is also known as “*shinrin-yoku*” as the Japanese term implies. Actually, forest bathing has scientifically proven the relaxing effects. This issue of *Highlighting Japan* introduces readers to forest bathing based on scientific knowledge and some of Japan's most famous forests, including the Akasawa Natural Recreation Forest in Nagano Prefecture, the birthplace of forest bathing, the Shirakami Sanchi Mountain Range, and the ancient pilgrimage routes of Kumano Kodo, as well as various initiatives that utilize forests.

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Why do People Relax when they Go to the Forest?

Many of us know from experience that going to the forest is relaxing. However, few people know why. One person who does is Miyazaki Yoshifumi, Emeritus Professor at Chiba University and Doctor of Medicine. He is a world-renowned authority on forest medicine and an advocate of forest therapy, which is defined as forest bathing supported by scientific evidence. We asked him about the relaxing and preventative medical effects of forest bathing.

Could you explain what forest bathing is?

Forest bathing is the practice of going to the forest, synchronizing with it, and experiencing comfort. People feel comfortable in a certain environment when their own rhythm is in sync with it.

People experience a sense of comfort in the forest because of the long history human beings have with nature. Humans emerged six to seven million years ago, but most people have lived in urban environments only in the 200 to 300 years since the Industrial Revolution, a period that represents less than 0.01% of human evolution. In other words, humans have spent more than 99.99% of their evolution in the natural environment. Since our genetic makeup does not change in the short period of several hundred years, we are physically adapted to life in the natural environment. In contemporary society, however, we live in a state of constant hyper-vigilance, stress, and susceptibility to disease.

So, because we humans evolved in the natural environment and are built to interact with and adapt to nature, we feel relaxed when we are in contact with it. This theory of mine has been named the “back-to-nature” theory by New Zealand researchers M. A. O’Grady and L. Meinecke.

Incidentally, the term “*shinrin-yoku*” (forest bath-

ing) was coined in 1982 by Akiyama Tomohide, then Director General of the Forestry Agency. His goal was to enhance the value of Japan’s forests by encouraging more people to visit them for relaxation. Then, in 1988, at the age of 34, I started my research on forest bathing to try to solve a question that had fascinated me since childhood: why do people relax when they come into contact with nature?

What kind of experiments have you done in your research on forest bathing?

Our research team conducted various experiments to find out how people’s stress levels change in forest and urban environments, and scientifically explained the relaxing effects of forests.

In 1990, we conducted an experiment on Yakushima Island that became the world’s first physiological experiment on forest bathing. In it, we analyzed the concentration of cortisol, a type of stress hormone, in saliva using the latest technology available at the time.

In addition, as part of the Forest Therapy Base Scheme launched in 2005, we conducted experiments in cooperation with local governments and companies throughout Japan, with the participation of 756 subjects at 63 forest and urban sites across the country. The purpose of the Forest Therapy Base Scheme was to accumulate scientific evidence on forest bathing and to help revitalize local communities by enhancing the value of forests. Our team was responsible for a large-scale experimental project designed to accumulate evidence. We conducted field experiments in forest and urban environments, spending four to six days and involving about 50 people at each site, including research team members, subjects, and local government staff. We also conducted indoor experiments on the physiological effects of visual, olfactory and



Miyazaki Yoshifumi, Emeritus Professor at the Nature Therapy Lab, Center for Environment, Health and Field Sciences, Chiba University, and Doctor of Medicine (left), with Associate Professor Ikei Harumi, who works with him on forest bathing research

auditory factors. The scale of this project, which involved experiments at 63 sites, was unprecedented globally, and I believe it helped Japan become a world leader in forest bathing research.

What kind of evidence did you obtain in these experiments?

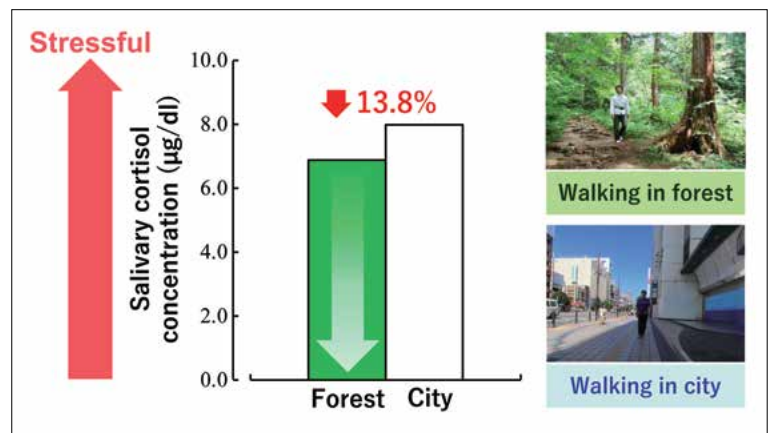
In 2003, I proposed the concept of forest therapy, which means forest bathing backed by scientific evidence. Through the experiments carried out as part of the Forest Therapy Base Scheme through 2018, we identified the following changes that occur in the human body in a forest environment, and were able to determine that spending time in the forest has a relaxing effect.

- A decrease in sympathetic nervous activity (which is known to increase during times of stress)
- An increase in parasympathetic nervous activity (which is known to increase during relaxation)
- A decrease in pulse rate
- A decrease in blood pressure
- A decrease in the concentration of the stress hormone cortisol (Fig. 1)
- Calming of prefrontal cortex activity

We also conducted forest therapy program experiments in the Akasawa Natural Recreation Forest, Nagano Prefecture, and Chizu Town, Tottori Prefecture. The programs included activities such as strolling in the forest, meditation, deep breathing, blind walking, and “throwing” stress and anxieties at waterfalls to wash them away. The experiments produced some interesting data. We found that these activities had a sustained effect on lowering blood pressure in people with hypertension. The results showed that blood pressure not only decreased after forest therapy, but also remained at normal levels three to five days after the subjects returned to work.

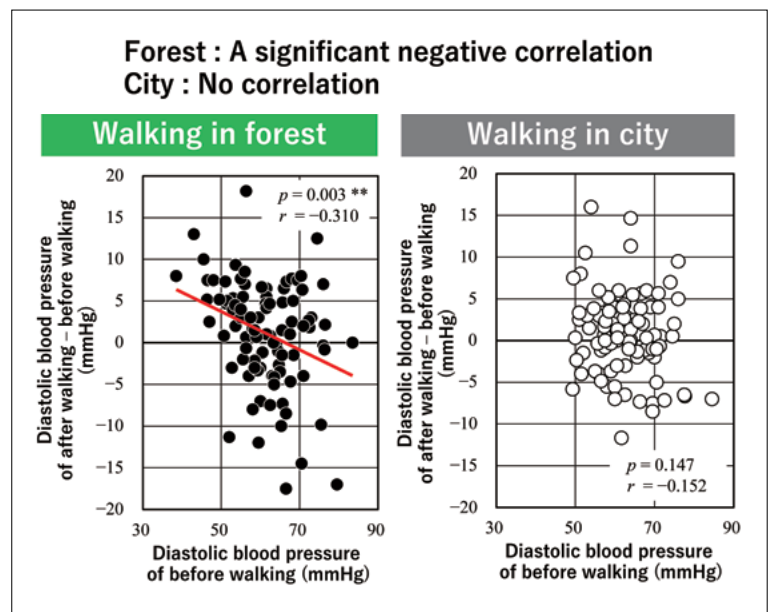
We also found that forest bathing helps regulate

Figure 1 Walking in the forest reduces stress and lowers the concentration of stress hormones.



Mean of 348 males in their 20s (34 sites), forest vs. urban environments: statistically significant difference
 Modified from original data in H. Kobayashi, Y. Miyazaki et al., International Journal of Environmental Research and Public Health 14:931, 2017

Figure 2 Physiological adjustment effect of forest therapy (diastolic blood pressure)



92 males in their 20s, forest walking: statistically significant negative correlation
 Modified from original data in C. Song, Y. Miyazaki et al. International Journal of Environmental Research and Public Health 12:4247-4255 2015

physiological functions. An experiment in which 92 subjects took a 15-minute walk in a forest resulted not only in a decrease in blood pressure in subjects with hypertension, but also in an increase in blood pressure in subjects with hypotension (Fig. 2). Similar effects were not observed when the same subjects

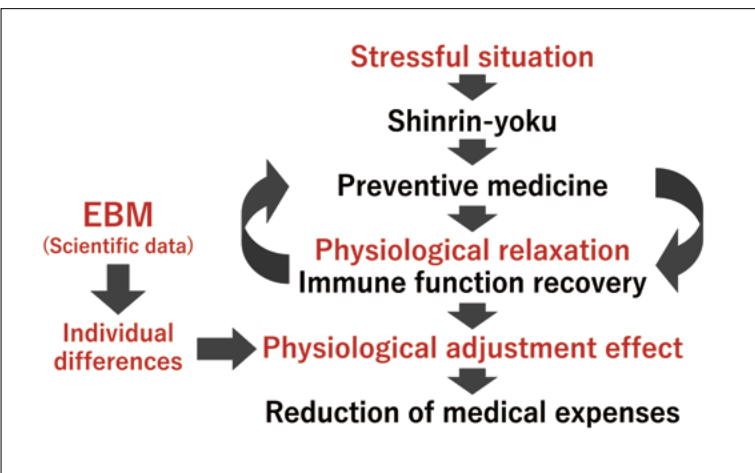
walked for 15 minutes in an urban environment. We called the effect of forest bathing in bringing blood pressure to normal levels a “physiological adjustment effect.”

Our research team provided scientific evidence to show that while forest therapy cannot cure diseases, it can be used to make the body more resistant to disease. This preventative medical effect of forest therapy is expected to contribute to the reduction of medical costs (Fig. 3).

As a doctor of medicine, why do you study both nature and people?

Forest therapy focuses on studying the effects of nature on people, but there is no system in Japan, Europe or the United States that studies and provides education with regard to both nature and people. I did not set out to become a human and forest researcher. However, as a result of my experience as a student at the Faculty of Agriculture, Tokyo University of Agriculture and Technology, and my work as an assistant at the Faculty

Figure 3 The concept of forest therapy



Modified from original data in Y. Miyazaki. *Shinrin-yoku: The Japanese Way of Forest Bathing for Health and Relaxation*; Hachette UK Company, Octopus Publishing Group; London, 2018

of Medicine, Tokyo Medical and Dental University, I was able to build a network in the fields of agricultural science and medicine, or in other words, nature and human research. In the past, the director of the Center for Health and Global Environment at the Harvard



People enjoying forest bathing at the Akasawa Natural Recreation Forest in Nagano Prefecture



Photo: Nonno-no-mori Nature Center

Guided tour of Lake Kussharo and space in Tsubetsu Pass, Tsubetsu Town

School of Public Health in the United States and the director of the Finnish Forest Research Institute have asked me for advice on how to implement research in an integrated manner with medical schools.

The integration of nature research and human research is in transition, and I believe that such integration of various fields, not only forest therapy, will become more important in the future.

Which forests would you recommend to overseas visitors?

Certification of forests under the Forest Therapy Base Scheme is based not only on scientific evidence produced by our research team, but also on the services that each region can provide, specifically hard infrastructure, such as lodging, hospitals, and accessible roads, and soft infrastructure or experiential activities, such as soba noodle-making and woodworking, box lunches and meals. Certified forests offer sample courses for day trips and overnight trips.


My first recommendation is the Akasawa Natural Recreational Forest in Nagano Prefecture. It is considered the birthplace of forest bathing in Japan and offers a very high level of forest therapy activities. In

the spring and fall, the Akasawa Natural Recreation Forest holds special forest bathing events. It also provides programs for visitors to enjoy with their children, such as forest railway rides and playing in the river.

I would also recommend Okutama Town in Tokyo because it is known as the area with the largest number of giant trees in Japan and is easily accessible from the Tokyo metropolitan area.

Chizu Town in Tottori Prefecture has also developed a high-quality forest therapy program, which has been adopted as part of corporate training programs.

Tsubetsu Town in Hokkaido also offers various programs that take advantage of the changing seasons, such as snowshoe hiking experiences¹ and stargazing programs.²

Japan is one of the most forested countries in the world. When visiting Japan, be sure to enjoy the relaxing effects of the beautiful nature as well as the unique aspects of Japanese culture born from the natural environment in each region. 

1. Forest therapy program in which participants hike on snowshoes through snow-covered mountains
2. Forest therapy program for stargazing in the forest

Enjoy a walk in the forests of Akan-Mashu National Park

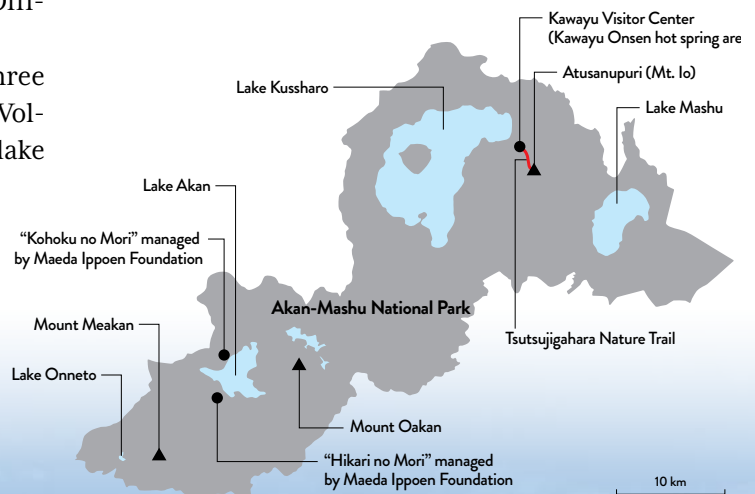
Akan-Mashu National Park is located in eastern Hokkaido, which is the northernmost part of the Japanese archipelago. Most of the 91,413 hectares of this huge park are covered with natural forests, mainly subarctic coniferous forests, which have retained their original appearance. The park Management Office introduced us some interesting areas to walk around within the park.

(Text: Morohashi Kumiko)

Akan-Mashu National Park is located in the eastern part of Hokkaido, between the Sea of Okhotsk to the north and the Pacific Ocean to the south. Cutting through the center of the park is a volcanic belt that stretches from the Kamchatka Peninsula to the Chishima Islands, creating a spectacular landscape of volcanoes, forests and lakes. Suehiro Keishiro, the National Park Utilization Planning Officer of the Management Office explains.

“The foundation of this national park is the three calderas¹ created by the activities of the Chishima Volcanic Belt. The topographical features of volcano-lake

pairs in close proximity to each other within small areas are rare in Japan. The park is huge, and consists of two distinctive areas. The first is the ‘Akan area,’ which is surrounded by deep primeval forests, and consists mainly of the majestic peaks of Mount Oakan and Mount Meakan, and Lake Akan, Lake Onneto and



Highlights of Akan-Mashu National Park

Lake Onneto is located within Akan-Mashu National Park, where lakes created by the activity of the Chishima Volcanic Belt and a rich natural environment are woven together.





Photo: Akan-Mashu National Park

You can enjoy forest bathing in the Japanese Spruce (Sakhalin spruce)³ forest that spreads out from right behind the Kawayu Visitor Center.



Photo: Akan-Mashu National Park

Iso-azalea flowers extend through the forest along the Tsutsujigahara Nature Trail

the other lakes and marshes in the area. The other is the ‘Mashu area,’ where you get a feel of the moisture and circulation of the water, with Lake Kussharo, which fills the western half of Japan’s largest caldera—Kussharo Caldera—and Lake Mashu, one of the clearest lakes in the world.”

Suehiro told us how to enjoy the forests in the Mashu and Akan areas.

“The Tsutsujigahara Nature Trail from the Kawayu Visitor Center in the Kawayu Onsen hot spring area of Mashu to Atusanupuri (also known as Mt. Io) is a flat trail that can be traversed by foot in about one hour. It is a precious place with a unique ecosystem of alpine plants that can withstand the volcanic gases and acidic soil discharged from Mt. Io. You can stroll through the forests and observe the plants living in this special environment—the trail starts with a Coniferous Forest Zone, and also has a Broadleaf Forest Zone and an Iso-azalea² Zone, all within a short distance of about 2.5 kilometers. The sight of 100 hectares of pure white iso-azaleas in the forest in early summer (around June) is especially stunning.”

In the Akan area, we recommend a guided tour that explores the forests by the Maeda Ippoen Foundation⁴, which has been working for over 90 years to preserve sustainable forests. According to Hibino Akihiro of the Lake Akan National Park Ranger Station, “In the early 1900s, a great number of trees in the Akan area forests administered by the Maeda Ippoen Foundation were cut down to clear space for ranching and timber

production.

However, Maeda Masana, the initial head of the park, believed that “this mountain should be changed from one to be logged into one to be viewed,” and based on his principle of not opposing the power of

nature but maximizing it, long-term efforts have been made to keep the forests in their original state and pass them down to the future generations. You can enter the Hikari no Mori (Mystical Forest) and Kohoku no Mori (North of the Lake Forest) with a qualified Ippoen Forest Guide. The many interesting spots include a giant *katsura* (*Cercidiphyllum japonicum*) tree said to be 800 years old and Tezukanuma Swamp with its hot springs, so we recommend that

you have the experience of forest bathing in a primeval forest preserved by the people of Akan.”

The Akan-Mashu National Park is currently part of the Project to Fully Enjoy National Parks.


Suehiro said, “In order to make the park more accessible to overseas visitors, we are working on a variety of projects, including the renovation of overnight accommodations and observatory facilities. We hope that many people will visit the unique, majestic forests of Akan-Mashu.” 



Photo: PIWTA

The black woodpecker, which also inhabits the area, is designated as a natural treasure.

1. A depression formed by volcanic activity.
2. A small evergreen shrub native to Hokkaido that is 30-70 cm tall. It is sometimes seen in gravelly alpine areas, and also grows in some volcanic ash areas and marshlands.
3. Found in Hokkaido and on Mount Hayachine in Honshu. It is designated as a Tree of Hokkaido along with the Ezo spruce.
4. A foundation set up to carry on the wishes of Maeda Masana, who developed the expansive mountain forests along the lakeside of Lake Akan in Hokkaido in early 1900, and to contribute to the preservation of its natural environment and appropriate use.

The Forests of Shirakami-Sanchi, Japan's First World Natural Heritage Site

The mountains of Shirakami-Sanchi, the first place in Japan to be inscribed as a UNESCO World Natural Heritage site,¹ represent one of the earth's rare places. Here, large area of primeval natural forest, mainly Japanese Beech, have remained in a “pure forest”² state. We asked Shiratori Mari of the Shirakami-Sanchi World Heritage Conservation Center to tell us about the site.

(Text: Morohashi Kumiko)

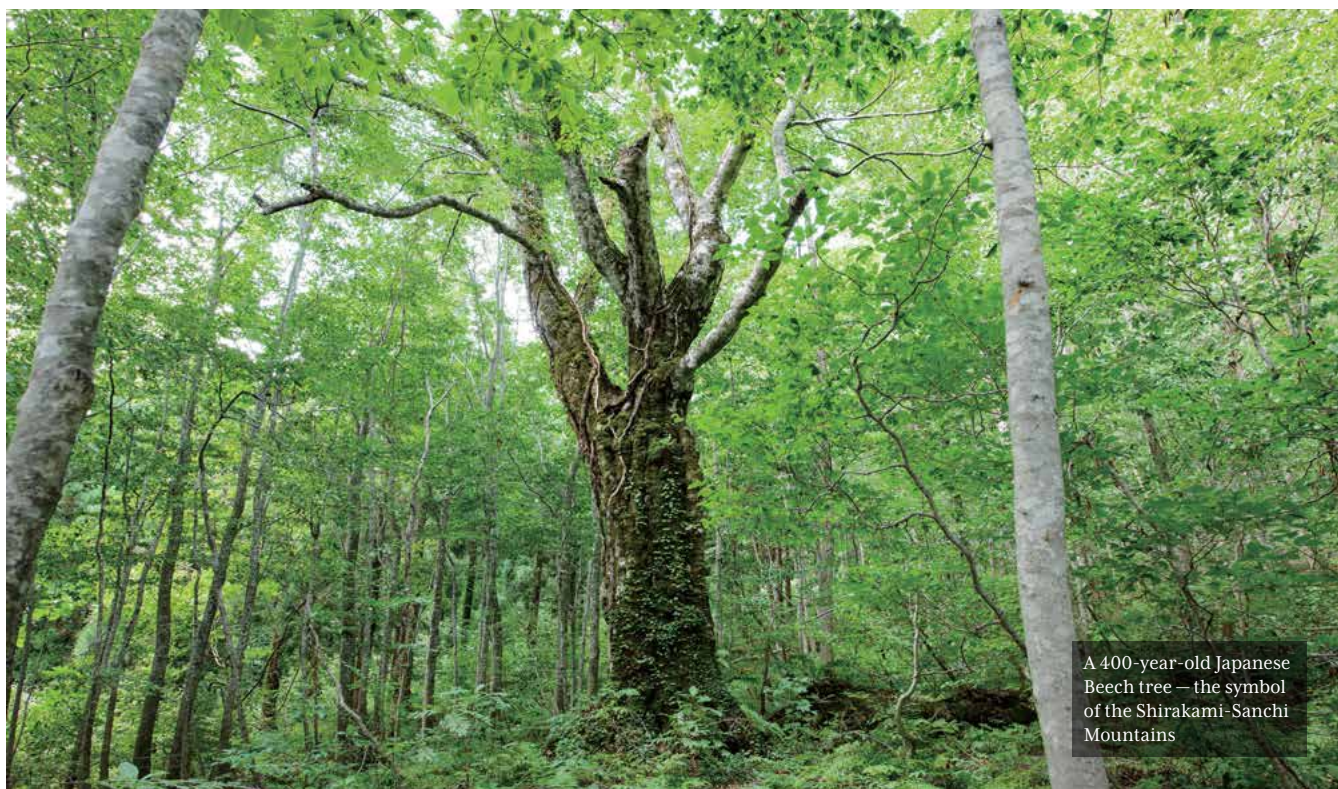


Photo: PIXTA

A 400-year-old Japanese Beech tree – the symbol of the Shirakami-Sanchi Mountains

The Shirakami-Sanchi World Heritage Conservation Center, Fujisato-kan,³ which is located at the southern foot of the Shirakami-Sanchi Mountains, is a facility where visitors can learn more about the significance of the World Natural Heritage Site that is Shirakami-Sanchi. Shiratori, who is a resident nature advisor at Fujisato-kan, revealed the features of the Shirakami-Sanchi Mountains.

“Shirakami-Sanchi is the collective name for the mountains that straddle Aomori and Akita Prefectures in the northern part of Japan's Tohoku region. The appearance of the mountains changes vividly from season to season, thanks to the deciduous broad-leaf



Photo: Shirakami-Sanchi World Heritage Conservation Center

Shirakami-Sanchi World Heritage Site as seen from the summit of Mt. Kodake (elevation: 1,042 m) in Fujisato Town, Akita Prefecture



Photo:PXTA

Mushrooms in the primeval forest of Shirakami-Sanchi

beech and other trees. The forest is like being held in the cradle of life that provides our village not only with nature's bounty such as nuts, wild vegetables, and mushrooms, but also delicious water thanks to the fallen leaves that store and filter rain and snow."

Shirakami-Sanchi is a mountainous region with elevations of 200 to 1,250 meters, covering an area of about 130,000 hectares. The roughly 17,000 hectares at the center of this area is inscribed as a UNESCO World Natural Heritage site.

"Within the vast area called Shirakami-Sanchi, one place in particular that is untouched by humans was inscribed as a World Natural Heritage site in 1993, recognizing it as the largest untouched Japanese Beech forest in East Asia, and for its ecosystem. December 2023 marked the 30th anniversary of its inscription. Beech trees are widely distributed in Europe, East Asia, and North America, but in this site, the diverse vegetation which is approximately 8,000 to 12,000 years old is still preserved today. In addition, it's praised for its unique feature of being a beech forest located in one of the world's snowiest regions."

Although the entire conservation area designated as a World Natural Heritage site is closed to the pub-



Photo:Shirakami-Sanchi World Heritage Conservation Center



Photo:Shirakami-Sanchi World Heritage Conservation Center

Above: Dakedai Education Forest in Fujisato Town, Akita Prefecture. This is a typical broad-leaf beech forest.

Below: Juniko Twelve Lakes in Fukaura Town, Aomori Prefecture

lic, Shiratori says there are many places around Fujisato-kan where visitors can freely enjoy Shirakami-Sanchi's nature.

"For 'healing,' I would recommend the Dakedai Education Forest in Fujisato Town, Akita Prefecture,⁴ Tomeyama in Happo Town, Akita Prefecture,⁵ the World Heritage Trail in the beech forest in Nishimeya Village, Aomori Prefecture,⁶ and Juniko Twelve Lakes in Fukaura Town, Aomori Prefecture.⁷ You can enjoy a slow walk along relatively flat footpaths through beautiful primeval forests, with sunlight spilling through the lush green foliage of the trees."

In addition to the forests, Shiratori also recommends Shirakami's abundant streams.

"Aside from the forests, the many streams provide a different look for the Shirakami-Sanchi Mountains. One place you can enjoy delicious stream water is at the heart of the Dakedai Education Forest. Shirakami-Sanchi has some of the softest water in Japan and tastes mild and delicious even when it's cold. I hope people can experience it when they come visit."

She also recommends that overseas visitors take a look at the cedar forests in the village before going into the mountains.

"Cedar is actually endemic to Japan, and Shirakami-Sanchi is a place where natural cedar grows wild over a wide area. The historical presence of cedar as an important commodity timber and industry in northern Tohoku may also interest overseas visitors."

She also wants visitors to enjoy the changes and differences between the coniferous cedar trees that adorn the satoyama (undeveloped mountain-village border zone) and the broad-leaf Japanese Beech trees that rise up deep in the mountains. Visitors will see the charm of both and experience a deeper enjoyment of Japan's forests. ■



Photo:Shirakami-Sanchi World Heritage Conservation Center

Above: Spring water in the Shirakami-Sanchi Mountains in Fujisato-cho, Akita Prefecture

Below: A walking tour through the Fujisato Town's cedar forest

1. UNESCO inscribes three types of World Heritage sites: (1) Cultural Heritage; (2) Natural Heritage; and (3) Mixed Heritage, which combines both Cultural and Natural Heritage values.
 2. A forest consisting of a single species of tree. Also called "simple forest." In this case, the term "tree species" refers only to tall trees, and excludes shrubs and flowering plants.
 3. A facility established by the Ministry of the Environment in 1998 in Fujisato Town, Akita Prefecture. The facility exhibits materials related to the nature of Shirakami-Sanchi and details about it as a World Heritage site, and has nature advisors on hand.
 4. In 2024 and 2025, only open in autumn. 5. Open only for guided tours.
 6. Open from May to November. 7. Open from April to December.

Bijinbayashi

“Forest of Beauties” Enriching the Satoyama Landscape

Okamachi City, in the south of Niigata Prefecture and approximately 200 kilometers north of Tokyo, is home to Bijinbayashi — meaning “Forest of Beauties” — a beech forest spread across the *satoyama*¹, an undeveloped woodland area near a village. We hear from an expert about the forest, which attracts around 100,000 visitors annually.

(Text: Morohashi Kumiko)

Bijinbayashi spans approximately 3 hectares (30,000 square meters) of hilly terrain filled with roughly 3,000 beech trees aged over 100 years. Kobayashi Makoto, a curator at Echigo-Matsunoyama Museum of Natural Science “Kyororo” (also known as the “Forest School”), situated adjacent to that forest, provides us with insights about Bijinbayashi.

“Bijinbayashi is not a primeval forest. Around 1920, all the existing beech forests in the vicin-



Photo: Ishizawa Yoji

Approximately 3,000 beech trees line Bijinbayashi

ity were cleared for charcoal production. However, young beech trees sprouted and flourished on the bare mountain simultaneously, shaping the forest into its present form,” explains Kobayashi.

The name ‘Bijinbayashi’ likely originated from the forest’s tall-standing, elegant beech trees.

“There are various theories regarding the origin of the name ‘Bijinbayashi,’ but one prominent explanation dates back to around 1960. It is said that when



Photo: Ishizawa Yoji

The beautiful straight, orderly beech trees of the well-maintained forest serve as a great place for forest bathing.



Photo: Ishizawa Yoji

A picturesque pond in Bijinbayashi is a popular photography spot.

a local resident spoke to a lumber merchant visiting the nearby village about the beauty of the beech trees' upright posture, they likened them to beautiful women in their prime. And the forest came to be known as Bijinbayashi, meaning 'Forest of Beauties.' Subsequently, it developed into a place for *shinrin-yoku*, or forest bathing, and the name became known nationwide."

There is a pathway through the forest, often maintained by a local forest protection association to ensure ease of walking for visitors by clearing dead branches and undergrowth. This conservation effort has received high praise nationwide, with many tourists, even from abroad, now visiting the forest specifically for forest bathing, eager to enjoy its beauty.

"The Matsunoyama Onsen hot spring area offers optional tours primarily for guests staying at local accommodations. These tours are guided by members of a local association who are well-versed in the area,"



Photos: Echigo-Matsunoyama Museum of Natural Science "Kyororo"



Photo: Ishizawa Yoji

Above: Many wild birds such as the narcissus flycatcher can be seen in the forest.

Below: Various types of dragonflies can be observed in the forest.

A sight only seen on rainy days: *Jukanryu*, where rainwater flows down the tree trunks with beautiful vertical stripes appearing on the beech bark.

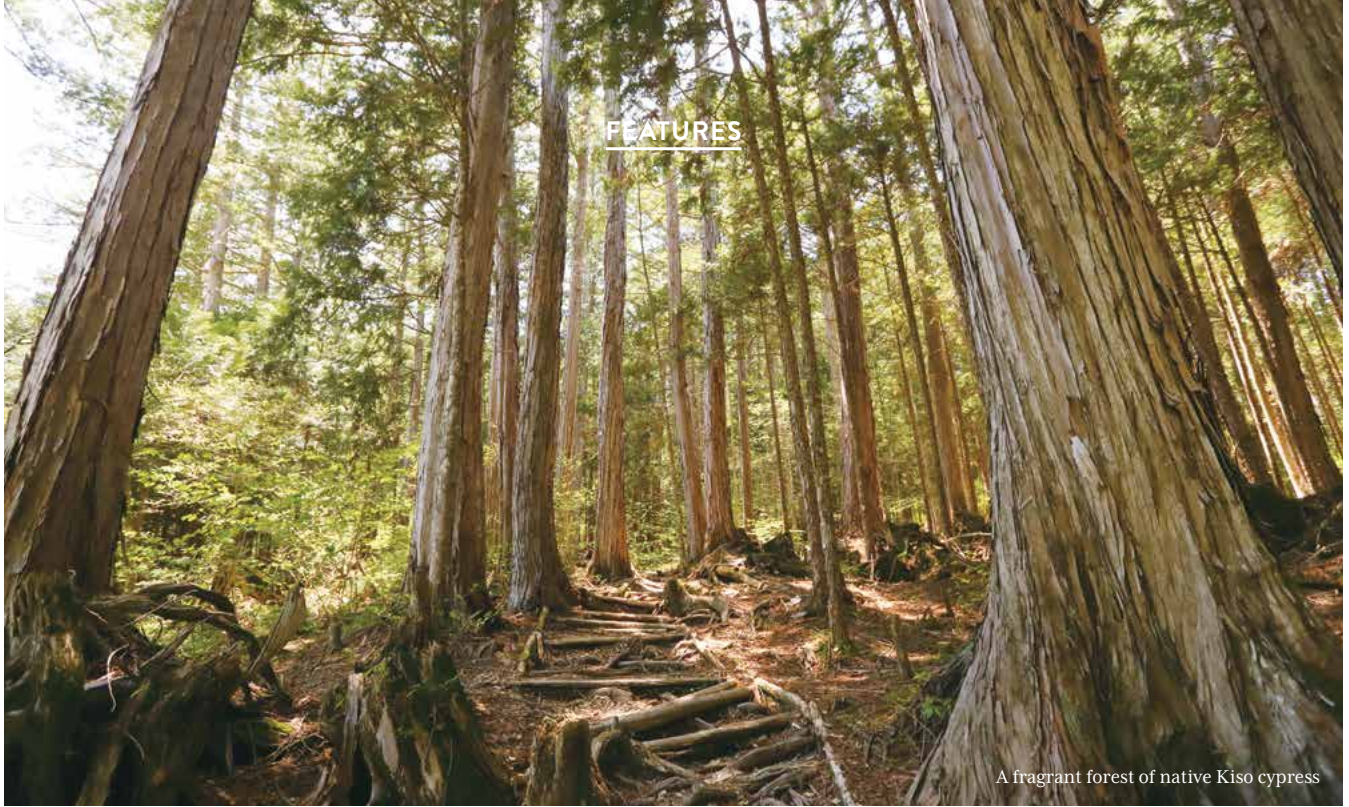


comments Kobayashi. "Curators at the Kyororo 'Forest School' also offer guided tours of the beech forest, with English language support available on both tours."

He continues, "From early summer to midsummer is a fine season when the leaves of the trees in the forest turn a deeper green. On rainy days during this period, the *jukanryu* (see photo), where rain cascades down the tree trunks, is a truly special sight. The branches of the beech trees extend sharply upwards, making it easier for rainwater to collect on their trunks, while the smooth bark allows seamless water flow. The rain-soaked bark shines with a glossy black color. However, what's really stunning is how the white patterns of lichens², clinging to the trunk, stand out beautifully against the dark bark. Some people say that the view on rainy days is the most beautiful in this beech forest. Many wild birds can also be observed, and a pond in the forest is a really popular spot for taking photos. I hope as many people as possible have the opportunity to visit this beautiful forest, a real local treasure." [1]

1. The area between pristine nature and urban center, consisting of human settlement, surrounding secondary forests, as well as farmland, reservoirs, and grasslands.
2. A complex life form that is a symbiotic partnership of two separate organisms, a fungus and an alga. They can look like leaves, branches, scales, or crusts.

Photo: Echigo-Matsunoyama Museum of Natural Science "Kyororo"



A fragrant forest of native Kiso cypress

The Birthplace of Shinrin-Yoku — A Cypress Forest with Trees Over 300 Years Old

Nagano Prefecture is located roughly in the center on Japan's main island of Honshu. The Akasawa Natural Recreation Forest,¹ which stretches across Agematsu Town in the southwestern part of the prefecture, has been preserved under a forest protection policy² for the past approximately 400 years. Here, we introduce this healing forest, which is considered the birthplace of the practice of *shinrin-yoku*, or forest bathing. (TEXT: Morohashi Kumiko)



The entrance to the Akasawa Natural Recreation Forest located in Agematsu Town in southwestern Nagano Prefecture

Located at an elevation of over 1,080 meters above sea level, the Akasawa Natural Recreation Forest is a coniferous forest of approximately 760 hectares, composed mainly of native Kiso cypress³ trees over 300 years old. Tatsuno Nao, a staff member of the Agematsu Town Tourism Association gave us an overview of the forest.

“The Akasawa Natural Recreation Forest was designated as Japan's first recreation forest in 1970, and hosted the first *shinrin-yoku* (forest bathing) event in Japan in 1982, gaining a name for itself as the birthplace of the practice of forest bathing. The forest of Japanese cypress trees, with its refreshing scent, was selected as one of Japan's 100 Most Fragrant Landscapes by the Ministry of the Environment.”

Near the entrance to the forest, there are various facilities where visitors can obtain information and enjoy refreshments, such as the Akasawa Forest Information Center, the Seseragi-no-Sato Akasawa Restaurant, the Forest Museum, and the Forest Railway Memorial Museum. Furthermore, seven walking courses extend from there, and visitors can combine them to make a round trip.

“Spending time in the woods has been scientifically proven to strengthen the immune system and relax the body and mind. The Akasawa Natural Recreation Forest hiking courses are also known as ‘therapy roads,’ and the aromatic compounds found in abundance in the forest are recognized for their health-promoting, preventive, and restorative effects. One



Visitors enjoying forest bathing

of our highlights is that we offer walking menus and events in partnership with Nagano Prefectural Kiso Hospital.”

We asked Tatsuno to share her recommendations for spending time in the woods.

“The Komadori (Robin) Course is the typical course. It is about 1.3 km long and passes through a scenery that is distinctive of Akasawa, giving a sense of the local nature and history. The course will take you to the Ise Shrine Goshinboku Felling Site, which is the home of *goshinboku*,⁴ the sacred trees used as timber in the repeated ceremonial rebuilding of the Ise Jingu Shrine,⁵ and the Dondofuchi mountain stream rest area. The giant Japanese cypress and the giant Sawara cypress at Sawarakubo along the course are the two largest trees in the park, so I highly recommend visitors to see them.”

Another recommendation is the Fureai (Friendship) Road, an accessible road that allows visitors in wheelchairs and with strollers to explore the area. Visitors can enjoy the refreshing scent of cypress, the coolness of the nearby mountain stream in summer,



Photo: Ishizawa Yoji

Fish can be seen swimming in the crystal clear mountain streams in the park.

and the colorful foliage in fall. In addition, several facilities that were used in the days when forestry was flourishing are still in use for sightseeing. Among them, the Akasawa Forest Railway, which was used to transport timber and local residents,

now operates as a sightseeing railway, giving visitors the opportunity to relax and enjoy the natural beauty of the park from the windows of the train.

The Akasawa Natural Recreation Forest is open until the beginning of November every year. If you have a chance, would you come and spend some relaxing time immersed in the serenity of nature here? **17**



Photo: Ishizawa Yoji

The Akasawa Forest Railway, now operated as a sightseeing railway

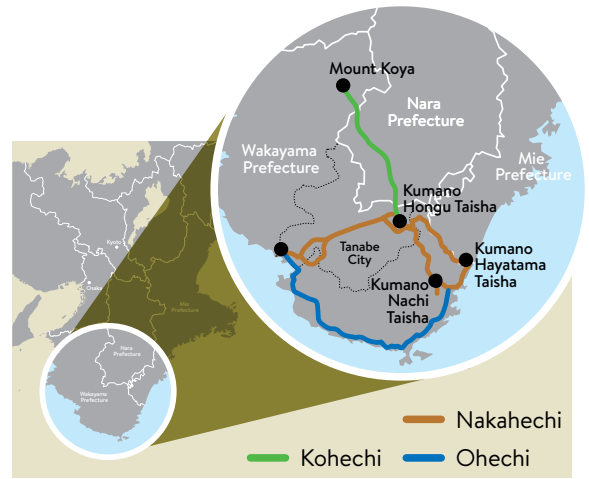
1. Natural recreation forests are forests that are particularly scenic and suitable for forest recreation activities such as forest bathing and hiking.
2. The rulers of the Owari Domain, who administered the area at the time, instituted a forest protection policy in the mid-17th century and worked to restore the forests that had been devastated by logging.
3. In Japan, natural cypress trees can be found in abundance in the Kiso region of Nagano Prefecture and the Tono region of Gifu Prefecture. The natural cypress wood material produced in these regions is called “Kiso Cypress.” Its characteristic feature is the dense annual rings.
4. The ceremonial rebuilding of the Ise Jingu Shrine (*Shikinen Sengu*) is a more than 1,300-year-old ritual performed once every 20 years, in which the divine palace (*shaden*) is rebuilt on one of two sacred sites (*miyadokoro*) that are adjacent to each other in an east-west direction and are used alternately. The sacred vestments, furnishings, and divine treasures to be placed in the divine palace are also remade before the deity enters the new shrine. The trees used to make the vessels in which the spirit of the deity is enshrined are called *goshinboku* (sacred trees).
5. Located in Ise City, Mie Prefecture, it is the center of all Shinto shrines in Japan. The Ise Jingu complex consists of 125 shrines, including Kotajingu (Naiku or Inner Shrine), dedicated to Amaterasu-Omikami, the ancestral Shinto deity of the Imperial family, and Toyo'ukedajingu (Geku or Outer Shrine), dedicated to Toyo'uke-no-Omikami, the guardian deity of clothing, food, shelter, and other industries.

Exploring 'Kumano Kodo,' a Forest-Enveloped World Cultural Heritage Site

The Kii Peninsula, Japan's largest, lies slightly west from the central area of Honshu, extending into the Pacific Ocean. Within the Kii Peninsula, trails known as the 'Kumano Kodo' have been preserved since ancient times. A section of these routes has been designated as a UNESCO World Cultural Heritage Site,¹ making it one of the rare trails worldwide to receive such recognition. This year, 2024, marks the 20th anniversary of the listing of the 'Sacred Sites and Pilgrimage Routes in the Kii Mountain Range,' which includes the Kumano Kodo routes. Here, we take a look at Kumano Kodo, situated amid the forests of the Kii Mountains.

(Text: Morohashi Kumiko)

The majority of the Kii Peninsula is occupied by mountainous terrain, known as the Kii Mountain Range, which spans the three prefectures



of Mie, Nara, and Wakayama. The mountain range with elevations ranging from 1,000 to 2,000 meters runs from East to West and from North to South and is characterized by a warm and extremely rainy climate, nurturing rich forests over the years.

To the southeast lies a sacred site known as 'Kumano Sanzan,' primarily comprising three shrines and two temples. This site has been a center of faith for centuries and is recognized as a vital component of the World Cultural Heritage Site. Near one of the three grand shrines, Kumano Hongu Taisha (located in Tanabe City, Wakayama Prefecture), sits the Kumano Hongu Heritage Center, dedicated to the dissemination of tourist information and local information. We spoke with Sugawa Aki who works at the center.

"The region centered around Kumano Sanzan, enveloped by the natural beauty of the Kii Mountain Range and known as 'Kumano,' has been revered as a sacred place dedicated to the gods since ancient times. Furthermore, from the 10th to the 11th century onwards, former emperors and monk emperors as well as nobles, frequently visited this sacred area on journeys known as Kumano pilgrimages. I believe that's why the trails were so well maintained," explains Sugawa.

"Kumano Kodo is a collective term referring to



Photo: PIXTA

A pilgrimage route leading to three sacred sites known as Kumano Sanzan. The model in the photograph is wearing attire typical of upper-class ladies during the medieval period, often worn while traveling.



Photo: Kumano Hongu Heritage Center

A mountain forest along the Kumano Kodo, which includes numerous subsidiary shrines called 'Oji,' meaning "prince," dedicated to the divine offspring of Kumano Sanzan.



Photo: Kumano Hongu Heritage Center

The Nakahechi route is a mountain route that stretches from present-day Tanabe City in Wakayama Prefecture to Hongu, Shingu, and Nachi.

both Kumano Sanzan, consisting of three shrines—Kumano Hongu Taisha, Kumano Hayatama Taisha, and Kumano Nachi Taisha—and two temples,² as well as the ancient roads connecting them with Ise, Osaka, Wakayama, Mount Koya, and Mount Yoshino.³ It is said that all the pilgrimage routes of the Kii Peninsula stretch over 1,000 kilometers, with a particularly culturally valuable section of it registered as a World Cultural Heritage Site, measuring approximately 350 kilometers.”

Kumano Kodo is a network of pilgrimage routes connecting sacred sites such as Ise Jingu (‘Ise Grand Shrine’)⁴ and Kumano Sanzan. It comprises approximately seven routes, including Kohechi, Nakahechi, and Ohechi. Of these, Kohechi linking Mount Koya and Kumano Sanzan, and Nakahechi, the primary pilgrimage path to Kumano Sanzan as well as linking the shrines and temples of Kumano Sanzan itself, are particularly recommended for those who wish to enjoy forest scenery.

“The Nakahechi route is characterized by numerous plantations of cedar and cypress trees,” says Sugawa. “These man-made forests are well-maintained through practices such as thinning, allowing people to walk through beautiful, well-tended groves. Due to the high rainfall all year round, there is also an abundance of rare fern species.”

Sugawa says that walking through the forests from early summer to summer offers an exceptional experience. “The forests along Kumano Kodo are relatively cool, and the amount of UV is only one-fiftieth of that in open sunny areas, so you can walk safely even in summer. In early summer, the forests are filled with new sprouts of ferns and other plants, as well as various flowers, offering plenty of sights to enjoy.”



Photo: Kumano Hongu Heritage Center

The view around Kumano Kodo's Doyu River

The forest bed made from thinned wood that Sugawa recommends along a section of the Nakahechi route from Hosshinmon Oji to Kumano Hongu Taisha is perfect for relaxing.

“If you lie down, you can feel the essence of the Kumano forests in the silence,” comments Sugawa.

The most popular route among overseas visitors is the approximately 38 km Nakahechi Route from Takijiri-oji to Kumano Hongu Taisha, which is easy to walk. Sugawa explains, “It is best enjoyed over one night and two days or two nights and three days, allowing for a leisurely journey. Takijiri-oji is considered the gateway to the sacred area of Kumano Sanzan, and from here, you enter a truly mountainous path.”



Forest bed made from thinned wood

Photo: Kumano Hongu Heritage Center

She continues, “The forest scenery is spectacular, and the route occasionally passes through mountain villages, offering a glimpse of traditional Japanese landscapes, making it popular among overseas visitors. I recommend trying it when you visit Kumano. This year marks the 20th anniversary of the listing of Kumano Kodo pilgrimage routes as part of the UNESCO World Cultural Heritage Site, and numerous events are planned to celebrate. We hope to welcome as many visitors as possible.”

1. The only two pilgrimage routes to be granted UNESCO World Cultural Heritage status are the ‘Sacred Sites and Pilgrimage Routes in the Kii Mountain Range’ in Japan and the Santiago de Compostela in Spain and France, as of now.
2. In addition to the three shrines, it also refers to two Buddhist temples near Kumano Nachi Taisha, namely Seiganto-ji Temple and Fudarakusan-ji Temple.
3. Mount Yoshino is part of the World Cultural Heritage ‘Sacred Sites and Pilgrimage Routes in the Kii Mountain Range.’ Similarly, Mount Koya includes Kongobuji Temple, which is also integral to the designation.
4. A shrine located in Ise City, Mie Prefecture, Japan, officially called ‘Jingu.’ It includes the Inner Shrine (Naiku), which enshrines the Sun Goddess Amaterasu Omikami, and the Outer Shrine (Geku), which enshrines Toyouke Omikami, the deity and guardian of industry, including food, housing, and clothing. In total, there are 125 shrines, including 14 auxiliary shrines. These are collectively referred to as ‘Jingu.’



Photo: Kumano Hongu Heritage Center

A glimpse of the scenery along the way from Takijiri-oji to Kumano Hongu Taisha on the Nakahechi route



A “therapy road” in the Tengu Highland Natural Recreational Forest

The Shikoku Karst Tengu Highland Natural Recreational Forest: A Refreshing Corridor in the Sky

The Shikoku region is located in the southwestern part of the Japanese archipelago. Approximately in the center of the region, on a plateau that rises 1,000 to 1,500 meters above sea level, is the Shikoku Karst, which stretches 25 kilometers from east to west. The term “karst” refers to a type of landscape made up of limestone and other rocks that are exposed on the earth’s surface due to erosion caused by rain and other factors. On the eastern edge of the Shikoku Karst, there is a vast woodland, called the Tengu Highland Natural Recreational Forest, which is traversed by “therapy roads,” hiking paths said to be quite therapeutic. We interviewed Kake-mizu Kazuhiko, who works as a forest guide. (TEXT: Morohashi Kumiko)



Shikoku Karst landscape with limestone formations protruding from the ground



Hoshifuru Village TENGU, the starting point of a therapy road

Photo: Ishizawa Yoji

The Shikoku Karst Tengu Highland Natural Recreational Forest, also known as a “Refreshing Corridor in the Sky,” is located 1,485 meters above sea level within the boundaries of Tsuno Town, Kochi Prefecture. It is an untouched forest certified as a forest therapy base.¹ Kakemizu works as a guide for the Tengu Highland Therapy Roads at Hoshifuru Village TENGU, a hotel in the Tengu Highland.

“The Tengu Highland is located in the Shikoku Karst, one of the three major karst areas in Japan. The Shikoku Karst is a unique geological landscape formed when limestone rocks that rose from the ocean floor some 250 million years ago were eroded over time by rainwater and groundwater. A significant feature is that the karst stretches like a belt across Ehime and Kochi prefectures for about 25 kilometers. The Tengu Highland Natural Recreational Forest is located at the eastern end of the Shikoku Karst. It is famous for its high altitude and beautiful views.”

A high plateau covered with vast grasslands dominates most of the Shikoku Karst area. There are exposed limestone formations that are often compared to flocks of sheep, as well as pastures where cattle can be seen grazing peacefully. To the east of the grasslands is a very different landscape — the Tengu Highland Natural Recreational Forest, a vast untouched woodland where visitors can experience nature from season to season. Currently, there are several walking roads certified as therapy roads in the natural recreational forest, each with a different atmosphere for visitors to enjoy. The most popular is called Shikoku no Michi. This hike, to and from Ohikiwari, a rock crevice designated as a nat-

ural monument, takes about five hours. Kakemizu told, “However, the road is too steep, so I think it wouldn’t be therapeutic to walk the road all at once. Therefore I used to lead visitors on a gentle one-kilometer section surfaced with Japanese cypress wood chips, one of the popular parts of Shikoku no Michi.”

“There is a Japanese cypress sawmill at the foot of the plateau. I experienced the soothing effect of the scent of the wood chips, which were discarded as a by-product of the grinding process. I suggested that they be used to surface the trail. My idea was accepted and led to the creation of a therapy road surfaced with wood chips.”

The wood chips are replaced regularly so that visitors can enjoy the scent of fresh cypress. Participants on the guided tours are encouraged to take about an hour to walk the approximately two-kilometer round trip at a leisurely pace and enjoy a relaxed interaction with nature.

“Guests often ask me ‘How many kilometers do I need to walk in order to feel the benefits?’ My answer is that forest therapy requires only one step into the forest to experience sufficient benefits. I encourage them to be mindful of using the five senses to bring nature into their bodies through the soft feel of the wood chips, the early morning calls of wild

birds, and the texture of different types of trees. As you can see, the natural recreational forest here is rich in healing properties. I would like to invite everyone who gets the chance to visit the Shikoku Karst Highland and enjoy a stroll in the untouched forest.”



A walking road paved with Japanese cypress wood chips

Photo: Ishizawa Yoji



Shikoku no Michi

Photo: Ishizawa Yoji



Rhododendron Decandrum (a type of azalea) flowers seen on the therapy road in May

Photo: Ishizawa Yoji

1. Certified according to the forest therapy base concept promoted by the Forest Therapy Executive Committee (composed of representatives of the Forestry Agency, the National Land Afforestation Promotion Organization, and the Japan Wellness Society).

FEATURES



Photo: Kikuchi City

The Kikuchi Gorge: Where Primeval Forests and Clear Streams Meet

The Kikuchi Gorge is adorned with forests of natural broad-leaved trees such as zelkova, maple, and oak, alongside underground subterranean waters¹ flowing from the outer rim of Mount Aso, creating a landscape rich in diversity. Here, we explore its charm and the various ways to enjoy it.

(TEXT: Morohashi Kumiko)

Kyushu, in the southwest of the Japanese archipelago, is home to a volcanic group referred to as Mount Aso, near its central area. Inside the caldera², one of the world's largest (approximately 17 km east to west and 25 km north to south), lies a group of central volcanic cones, primarily including the five peaks of Mount Aso³. Together, these formations are collectively known as Mount Aso. The mountains surrounding the caldera are known as the outer rim of Mount Aso, stretching approximately



130km around. In the northwest part of the outer rim, there is a forested area covering around 1,192 hectares, known as Kikuchi Gorge.

It is a renowned location selected as one of the 100 best forest bathing spots, 100 best water sources, and 100 best waterfalls in Japan. Here, we learn about the charm of Kikuchi Gorge from Maejima Takeshi who works for Kikuchi City in Kumamoto Prefecture.

“Kikuchi Gorge boasts primeval forests, including broad-leaved trees and the source of the Kikuchi River. One of its notable features is the emergence of underground waters flowing from the outer rim of Mount Aso, forming a diverse array of rapids, pools, and waterfalls.” He continues, “The changing seasons and rich nature in the gorge create stunning views said to embody the epitome of beauty, offering a serene sanctuary where nature’s splendor truly soothes the soul.”

Visitors can enjoy the sight of fresh young leaves in spring to early summer, and vibrant autumn foliage in the fall, experiencing the changing beauty of the forest throughout the seasons. Even at the height of Japan’s hot and humid summer, you can feel the coolness in the gorge.


“Even in the summer, the stream’s water temperature stays cool at 13°C, while the river breeze and shaded areas create a refreshing, cool atmosphere. This makes it a popular destination for those seeking relief from the heat and a tranquil retreat,” explains Maejima.

To fully enjoy the forest, visitors are recommended to take a relaxing walk along the approximately 1-kilometer ‘Iyashi Course’ (‘iyashi’ translates as ‘healing’ in English), which takes about 40 minutes for a round trip from the Kikuchi Valley Visitor Center near the gorge entrance.

“This course offers a leisurely walk through the forest while enjoying the cobalt blue streams. The

main highlight, Reimei (‘dawn’) Falls, is one of the most popular photography spots within the gorge. Especially in early summer, when the water volume is high, you can enjoy the water flowing down from large rocks.”

Visitors can also enjoy the breathtaking sights of cascading waters at places such as Tengu Falls⁴ and Ryugabuchi, Pool (‘dragon’s pool’) experiencing the ever-changing beauty of the streams. In late July, many people visit the area around Ryugabuchi to see the beautiful red heart lily flowers in bloom. For people coming from overseas, a course that runs deep into the primeval forest is also popular ‘Mankitsu Course’ (‘mankitsu’ translates as ‘fully satisfying’ in English).

“The ‘Mankitsu Course’ takes approximately 1 hour and 20 minutes to complete, leading visitors further into the depths of the forest. The impressive Yonjusanman (‘four hundred and thirty thousand’) Falls and Tengu Falls, among others, within the forest, showcase the vigorous splendor of nature’s pure waters, creating an unforgettable sight. I also recommend taking a break on the wooden benches at the Hirogawara rest area located at the halfway point of the trail. Simply closing your eyes and listening to the sound of the river can instantly lift your spirits,” comments Maejima. “At the visitor center located at the entrance of the gorge, you can find specialty dishes like grilled mountain trout and light snacks available for purchase. After a walk, many visitors enjoy a meal while taking in the beauty of the gorge. If you get the chance, we’d love for you to stay a while and truly take in the experience.” 



Beautiful red heart lily flowers bloom at Ryugabuchi in the gorge.

Photo: Kikuchi City



Photo: Kikuchi City

1. Water that seeps into the ground easily and flows beneath the surface
2. Calderas, often seen in volcanic regions, are depressions with diameters exceeding one kilometer, many of which are formed by the collapse of the ground. The bottom of the depression is called the caldera floor, while the surrounding elevated areas are known as the outer rim.
3. The collective name for the five central peaks of Mount Aso. From east to west, these are: Neko-dake (1,433 meters), Taka-dake (1,592 meters), Naka-dake (1,506 meters), Eboshi-dake (1,337 meters), and Kishima-dake (1,326 meters).
4. Tengu are goblin-like creatures believed to dwell in mountainous areas and are associated with supernatural powers, martial arts, and wisdom.

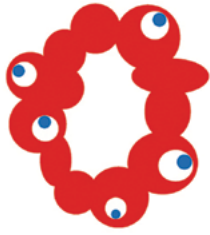
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Left: Rapids of different sizes can be seen in the gorge.

Right: Reimei Falls is a highly popular photo spot.

This page

Yonjusanman Falls can be seen on the ‘Mankitsu Course’



OSAKA, KANSAI, JAPAN
EXPO
2025



Expo 2025 logo (left) and MYAKU-MYAKU, the official character of the Expo (right)
©Expo 2025

Theme: Designing Future Society for Our Lives
Concept: People's Living Lab (A laboratory for a future society)
Venue: Yumeshima Island (Osaka City waterfront) (Within 50km of Kyoto and Nara)
Period: April 13 to October 13, 2025
Participation: 161 countries/regions and nine international organizations (as of March 14, 2024)

Expo 2025 Osaka, Kansai, Japan Designing Future Society for Our Lives

Expo 2025 Osaka, Kansai, Japan, which will commence in April 2025, is themed ‘Designing Future Society for Our Lives’ and will serve as ‘a laboratory for a future society,’ where visitors can experience cutting-edge technologies, services, and systems that anticipate the future. In this article, we provide an overview of the Expo, now about a year away, and highlight some of the pavilion exhibits.

EXPO 2025 Pavilions

At Expo 2025, participating countries and regions, international organizations, the Japanese government, local governments, and private companies will all showcase pavilions. The Expo aims to be a place where the world’s knowledge, including cutting-edge technology, will be brought together and ideas shared to co-create our future society.

■ An Introduction to Official Participants' Pavilions

•Australia Pavilion

The design of the Australia Pavilion symbolizes Australia’s diversity, creativity, and incredible nature. Built using reusable and repurposed materials from previous major international events, sustainability is a strong focus at the Australia Pavilion. The theme of the pavilion is ‘Chasing the Sun’ and visitors will have the opportunity to engage in a variety of immersive programs that showcase the new Australia, including its modern capabilities, rich culture, and dynamic society.



Design by Buchan Holdings Pty Ltd, Render by FloorSlicer

•Thailand Pavilion

The main theme of the Thailand Pavilion, ‘Thailand Connecting Lives for Great Happiness,’ aims to spread joy to people globally through the warm and welcoming Thai smile. The architectural design, inspired by elephants and wood, reflects the grace and diversity of Thailand, while prioritizing eco-friendly practices for beauty and energy efficiency. Inside, visitors can explore three distinct areas: Cultural Landscape, Immunity, and Thai Landscape, each showcasing the allure of Thai culture and art through exhibitions and events. The pavilion will also highlight the richness and vitality of Thai cuisine, emphasizing the country’s food culture.



■ Overview of Japan Pavilion (Japanese Government Pavilion)

In the Japan Pavilion, Japan, as the host country, will hold presentations on the Expo's theme, 'Designing a Future Society for Our Lives,' highlighting its initiatives. Specifically, under the theme 'Between Lives,' visitors will have the opportunity to experience the interconnected web and circulation of life. The pavilion employs technologies and systems to recycle carbon dioxide and waste, reintegrating them into circulation. It will showcase biogas power generation utilizing food waste from the Expo site, alongside other advanced Japanese carbon recycling technologies, to establish a cyclical loop, thereby illustrating the concept of circulation. Ultimately, the goal is to encourage visitors to embrace sustainable practices for

achieving a sustainable society, encompassing ideals such as carbon neutrality and a circular economy.



Image of the exterior of the Japan Pavilion
Provided by Ministry of Economy, Trade and Industry

*For information on other international pavilions, please access the links below.

Japanese : <https://www.expo2025.or.jp/official-participant/>

English : <https://www.expo2025.or.jp/en/official-participant/>

Experience a 'Future Society for Our Lives'

At the Expo site, visitors can immerse themselves in next-generation technologies and envision future societies spanning various fields. For instance, they can delve into a future where robots and AI are integral to daily life, and also witness the future of healthcare, where advanced technologies such as regenerative medicine are utilized for treatment.

② Experimental Demonstration of the 'AI Suitcase'



Experimental demonstration of the 'AI Suitcase' autonomous robot which can safely guide visually impaired people to their destinations both indoors and outdoors.

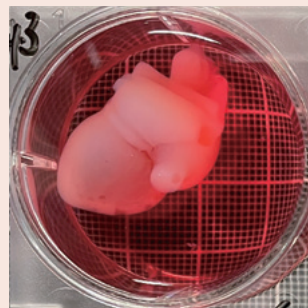
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① Image of an encounter with an android robot at "Future of Life" produced by ISHIGURO HIROSHI

The pavilion produced by ISHIGURO HIROSHI showcases approximately 20 androids and around 30 other robots, offering a glimpse into what life might be like in fifty years' time.

©FUTURE OF LIFE / EXPO2025



③ A 3D artificial heart utilizing technology based on induced pluripotent stem cells (iPS cells)

At the pavilion managed by the Pasona Group, visitors can observe a heart created with induced pluripotent stem cells (iPS cells) actually pulsating inside culture fluid.

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As we move closer to the Expo period and beyond, expect updates on pavilion details and event information. If you are visiting Japan in 2025, be sure to experience the vision of the future societies that the Expo aims to achieve, bringing together people and innovations from around the world to create solutions for global issues.

For information on EXPO 2025 Osaka, Kansai, Japan, please access the links below.

Japanese : <https://www.expo2025.or.jp/>

English : <https://www.expo2025.or.jp/en/>

For ticket information, please access the links below or scan the QR code.

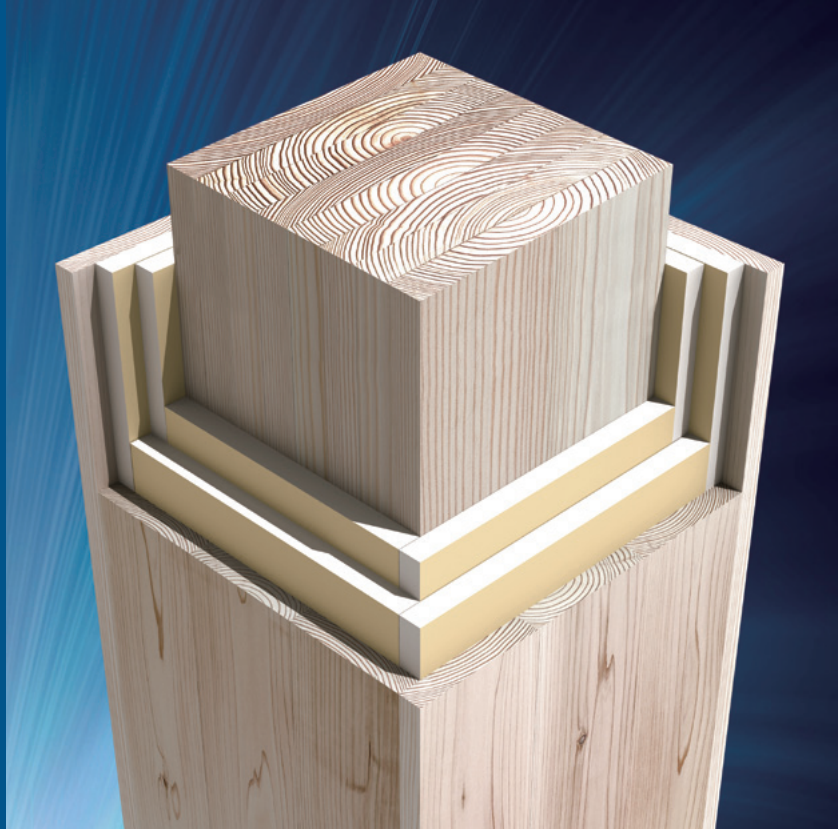
Japanese : <https://www.expo2025.or.jp/en/tickets-index/>



English : <https://www.expo2025.or.jp/en/tickets-index/>



A WOODEN “DREAM MATERIAL” WITH OUTSTANDING FIRE RESISTANCE



Cross section showing the three-layer construction of COOL WOOD
Photo: Shelter Co., Ltd.

A Japanese company has developed a wooden “dream material” with outstanding fire resistance that can be processed in the same way as ordinary wood and maintains the warmth of its appearance. This new fire-proof wooden material features a three-layer construction with gypsum board inserted in between layers of wood. It can even be used to construct large high-rise buildings, which until now could only be built with reinforced concrete or steel frames.

Fukuda Mitsuhiro

In Japan, a country blessed with an abundance of forest products, multi-story buildings and other large structures have been built with wood since ancient times. A classic example is the five-storied pagoda of Horyu-ji¹, a Buddhist temple in Ikaruga, Nara Prefecture thought to be one of the oldest existing wooden structures in the world. The beautiful pagoda, about 30 meters in height, was built with advanced technology for its time, and has been standing tall for more than 1,300 years. Numerous structures at Horyu-ji, including this five-story pagoda, were given UNESCO World Heritage Site status in 1993 as “Buddhist Monuments in the Horyu-ji Area.”

Despite this, even in a country like Japan with a proud history of such advanced wooden construction technology, it has been difficult to overcome the major weakness of wood

as a building material: its low fire resistance. Historically, both Kyoto (Heian-kyo, a former name), the capital of Japan for more than 1,000 years from the end of the 8th century, and Edo (present-day Tokyo), the political and economic center of Japan during the Edo period (from the early 17th century to the mid-late 19th century), were repeatedly struck by large fires and reduced them to ashes on several occasions. For this reason, since the beginning of modernization following the end of the Edo period, wooden structures, particularly large buildings and those with multiple stories, have been regulated by the Japanese government, primarily in the interest of fire prevention.

On the other hand, if it were only possible to create fireproof wood materials while maintaining the texture and warmth of wood, large-scale wooden buildings could be built. Until now, however, “non-flammable wood” has been the stuff of dreams.

A new construction material

now offers a solution to the challenging technical problem of creating a wooden material that will not burn. COOL WOOD² was developed in 2013 by Shelter Co., Ltd., a company founded in 1974 and headquartered in Yamagata City. COOL WOOD features a three-layer structure that consists of a load-bearing wooden core, a fire-stopping gypsum board, and a surface layer made with wood. (See photo.) The core and surface layers can also be made with cedar or cypress and others, both local specialty woods.

COOL WOOD has also passed a stringent fire resistance test prescribed by the Japanese government (Ministry of Land, Infrastructure, Transport and Tourism). In the most stringent three-hour fire resistance performance test, the test specimen was exposed to fire at temperatures exceeding 1,000°C for three hours, then left in the furnace with the fire extinguished for nine more hours. After these 12 hours, the furnace



COOL WOOD (with one-hour fire resistance) is used for the pillars in the Nanyo City Cultural Hall in Nanyo City, Yamagata Prefecture. (Total floor area: 5,900.98 m²; number of floors: three above ground and one basement level)

Photo: Shelter Co., Ltd.

was opened and inspected to see if any burn marks would be found on its load-bearing wooden core. This was to confirm that, in the event of a fire, even if it were not possible to extinguish it for an extended period of time, the fire would die out spontaneously and the building would not collapse.

COOL WOOD was patented in 2009 and passed the three-hour fire resistance test in 2017. It has attracted attention in Western countries, where there is strong concern regarding environmental issues. The material has been patented in Canada and Switzerland as well, and technical cooperation involving it has taken place in Switzerland and the US. In 2020, Shelter Co., Ltd. received the Award for Science and Technology (Technology Category) by the Minister of Education, Culture, Sports, Science and Technology for its development of this fireproof wooden material.

At the present time, the number of large buildings employing COOL WOOD, taking advantage of the tex-

ture and warmth of wood, is increasing throughout Japan. These include the largest wooden concert hall³ in the world, which is located in Nanyo City, Yamagata Prefecture; a commercial facility directly connected to a railway station in Odawara City, Kanagawa Prefecture; and a 10-story office building in the Nihonbashi Kabuto-cho district of Chuo City in Tokyo. COOL WOOD is also used for the pillars and beams of the wooden part of the Toyosu Senkyaku Banrai facilities in Tokyo's Koto City, a market combining eateries and retail

shops with an atmosphere recreating an Edo-period townscape.

An increase in demand for wood could have a stimulating effect on Japan's forestry industry, which is currently in decline, while also increasing carbon dioxide absorption as abandoned forests are replanted and cared for. Promoting local production and local consumption of lumber could also help revitalize local communities. The diverse possibilities offered by this wooden "dream material" with its outstanding fire resistance continue to expand.



COOL WOOD offers a level of fire resistance that has even passed a three-hour fire resistance test.

Photo: Shelter Co., Ltd.

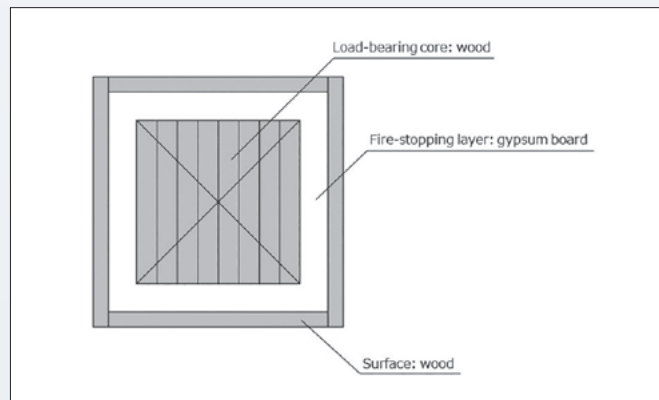


Diagram of COOL WOOD's makeup

Photo: Shelter Co., Ltd.

1. Considered to have been built by Prince Shotoku (574–622) in the early 7th century. Destroyed by a fire in 670, it was later rebuilt in its current form.

2. Registered trademark of Shelter Co., Ltd.

3. Recognized by Guinness World Records (TM) on December 21, 2015 as the largest wooden concert hall in the world.

Art Inspired by the Seasons: Wagashi



Minazuki, a type of *wagashi* that embodies wishes for good health and happiness

Photo: PIXTA

Kaaisan is a Kyoto-based creator who promotes Japanese culture in English day by day. In this month's issue, Kaaisan talks about *wagashi* (traditional Japanese confectionery).

Wagashi is a general term for the kind of sweets that have been made in Japan since ancient times. They are characterized by the use of various plant-based ingredients such as beans and rice. *Wagashi* design changes with the seasons, with some popping up only at certain times of the year, like Halloween costumes, and others conveying the spirit of the season through their appearance, like Christmas *coffrets*.¹ Just as favorite seasons come and go in a regular pattern, the availability of specific types of Japanese sweets only at certain times of the year is both a tease and a delight. Let's follow *wagashi* on a journey through the year in Japan.

Kaaisan

Spring *wagashi*

In spring, there are many light-colored sweets that evoke the image of budding plants. *Sakura mochi*, a typical example of spring *wagashi*, comes in two styles: Kansai style and Kanto style.² Kansai-style *sakura mochi* are light pink *mochi*³ glutinous rice cakes filled with *azuki* bean paste (with some beans left whole) and wrapped in pickled *sakura* cherry leaves. In the Kanto region, the *azuki* bean paste is rolled in a crepe-like dough, which is then wrapped in a pickled *sakura* cherry

leaf. *Sakura mochi* is so popular, it can even be found in convenience stores and supermarkets outside of the spring season.

Summer *wagashi*

During the hot and humid Japanese summer, cool-looking smooth sweets made with agar or *kuzu* are especially popular. *Minazuki* is a *wagashi* made with a jelly-like base made to resemble a small piece of ice and topped with *azuki* beans. In Japan, the color red is traditionally

believed to keep evil spirits away, so this *wagashi*, with the hope that the red beans on top will do just that, symbolizes wishes for good health and happiness.

Autumn *wagashi*

As the season of chestnuts and sweet potatoes, autumn is known for *wagashi* such as *kuri-kinton* (candied chestnuts and sweet potatoes) and *imo-yokan* (sweet potato jelly). Besides, there is also a genre of Japanese confectionery called



Kaaisan

Creator of English-language short film introductions to Japan. She manages an online community for like-minded people interested in Japanese culture and worldview to meet and learn together. She also plans and organizes various events on an irregular basis.



Sakura mochi (Kanto style), a *wagashi* representing spring

Photo: PIXTA



A *nerikiri* sweet, visually representing the season (*Nerikiri* with pumpkin, apple and ginkgo leaf shaped toppings)

Photo: Kaaisan

“*nerikiri*,”⁴ is made with white bean paste and sugar as the basic ingredients. *Nerikiri* sweets are made all year round, while they express a seasonal feeling with their distinctive designs and motifs. In autumn, *nerikiri* are shaped to resemble motifs such as colorful leaves and pumpkins.

around a filling of white *miso-an* bean paste, and a slice of burdock root. The origin of this treat can be traced back to around the 10th century, when there was a custom of praying for longevity by eating something hard (*hagatame*⁵).

best to leave things to professionals in each field. Learning about the background and motifs of Japanese sweets will help you appreciate their flavors better and enjoy them even more.

Winter wagashi

Zenzai is a popular Japanese winter *wagashi* among ordinary households in the Kansai region. It is made by simmering *azuki* beans with sugar and adding *mochi* cakes to the mixture to create a warming and delightful winter treat. *Hanabira mochi*, served mainly in Kyoto on New Year’s Day, is a thin layer of *mochi* wrapped

Some popular *wagashi* are available year-round at supermarkets and convenience stores, but if you want to experience the real world of traditional Japanese confectionery, specialty stores are the place to go. There is even a Japanese proverb, “For *mochi* (rice cakes), go to the *mochi* shop” (“*Mochi wa mochiya*”), which uses the popular *wagashi* ingredient (*mochi*) to express the idea that it is



Hanabira mochi (right) and *matcha* powdered green tea (left), a traditional refreshment served since ancient times, most notably in Kyoto

Photo: Kaaisan

1. Limited-edition cosmetic kits released by various brands in time for the Christmas season.
2. Kanto: a large area roughly consisting of Tokyo and the surrounding prefectures. Kansai: an area roughly consisting of Kyoto, Osaka, Kobe and the surrounding prefectures.
3. Kansai-style *sakura mochi* is made from *domyoji* flour, which is prepared by steaming glutinous rice called *mochi gome*, drying it, and then grinding it with a coarse millstone. Kanto-style *sakura mochi* uses a crepe-like dough made from wheat flour and refined rice flour.
4. In addition to describing a type of Japanese confectionery, *nerikiri* can also refer to the dough used to make *wagashi* itself, which is a white bean paste kneaded with an added thickener.
5. On the 100th day after a child’s birth, the family holds a traditional Japanese ceremony called *okuizome* (literally “first meal”). After pretending to feed the baby a variety of foods, the parents perform a ritual called *hagatame no gishiki* (literally, “tooth-hardening ritual”). They touch the tip of the chopsticks to a pebble prepared along with the food, and then gently place the tip on the baby’s gums as an expression of their hope for the baby to have strong teeth and live a long life. (See *Highlighting Japan*, May 2023.)

The charm of Rakugo, having human empathy and a laughter-filled Japanese traditional storytelling art with a 400-year history

Katsura Fukuryu is a native Canadian who came to Japan in 2001 and is now a professional *Rakugo* storyteller. Outside of Japan, he performs in English, seeking to share the laughter of this traditional Japanese performing art with the world. We asked him what makes *Rakugo* fun and how to enjoy it.

Katsura Fukuryu



Katsura Fukuryu, an active *Rakugo* performer in Japan
Photo: Katsura Fukuryu Office

The traditional Japanese storytelling art of *Rakugo* originated more than 400 years ago, during the Edo period (early 17th century to mid-late 19th century). It contains humorous depictions of everyday life in that era, including love-hate relationships and social satire, all in a single story. It has stayed relevant through the ages and is still performed today. I consider it to be a true art form.

A big part of the charm of *Rakugo* is that a single performer plays all the characters. *Rakugo* storytellers play the roles of men and women, young and old, even animals, using different tones of voice, vocal impres-

sions, facial expressions, and gestures, as well as large movements. You can enjoy *Rakugo* even without knowing the language or the historical background, because it is a form of entertainment that invites you to freely expand your imagination. The atmosphere of the fast-paced conversational narratives will bring up a picture of the story in your mind.

For example, in the *Rakugo* story *Toki Udon*, in which a man tries unsuccessfully to cheat on his bill at an *udon* noodle shop, the *Rakugo* storyteller uses a folding fan as if eating with chopsticks. With sound effects unique to the Japanese language and movements, the storyteller can make

it appear as if they are actually slurping *udon*, and this might startle a non-Japanese who sees it for the first time. This kind of technique is one of the interesting aspects of *Rakugo*.

I once performed *Toki Udon* for my grandmother, who lives in Canada. She was very strict about table man-



Katsura Fukuryu performing *Rakugo* in English for a non-Japanese audience
Photo: Katsura Fukuryu Office



Katsura Fukuryu

In October 2016, he joined the Katsura Fukudanji Ichimon (House), and became the 11th disciple of Katsura Fukudanji. He is based in the Kansai region, and performs at *Yose* (*Rakugo* theaters) throughout Japan. With the goal of showing the charm of *Rakugo* to the world, he has appeared in shows in Las Vegas, San Francisco, and Hawaii in the United States, as well as in Canada and the Philippines.



ners when I was a kid, and she used to get angry with me when I slurped my pasta. I wondered what would happen if I did *Toki Udon* for her. At first I was nervous—would Grandma get mad at me?—but she really laughed a lot during the udon slurping part. The sight of her being so delighted made me realize that laughter transcends culture.

When I first encountered *Rakugo*, I myself didn't know a thing about it. However, when a friend showed me a video of an English-language *Rakugo* performance by the master Katsura Shijaku, I was immediately hooked, to the point where you could call me a "*Rakugo* addict." Unlike stand-up comedy* in the West, where you generate lots of laughs every minute, in *Rakugo*, you tell a story through narrative and performance alone. It is an art form that should seem fresh to people who are unfamiliar with Japanese culture.

I want to spread the fun of *Rakugo* to the rest of the world, and to this end I have been translating Japanese *Rakugo* stories into English and giv-



Facial expressions and gestures expand the audience's imagination

Photo: Katsura Fukuryu Office

ing *Rakugo* performances overseas. The difficulty in adapting *Rakugo* to English is that it is not enough merely to translate the Japanese puns into English. I try to think up new jokes that work well in English-speaking cultures and in today's world, while still maintaining the atmosphere and lesson learned from each story. This

is a big challenge, but since laughter is universal, I create my stories with a belief that I know what is funny.

I've been a *Rakugo* storyteller since 2016, but I still need a lot of training. I want to keep contributing to and promoting the world of *Rakugo* so that people all over the world will find out about and experience its charm.

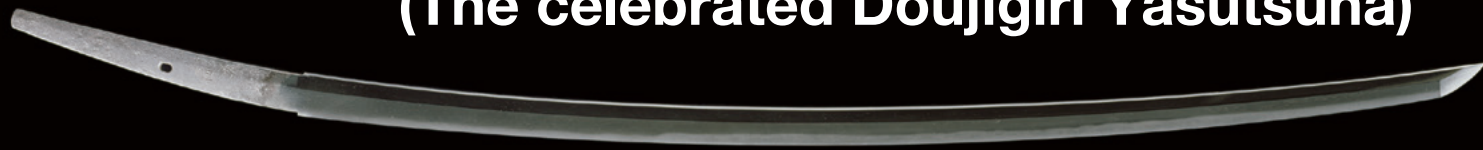
* A comedy style that is a mainstay in Europe, the US, Africa, and other parts of the world, in which a single performer stands on stage with a microphone and delivers monologues to the audience. Stand-up comedians talk about a variety of topics in a humorous way, mixing in social satire, irony, etc.



In *Rakugo*, folding fans are used as various objects. The example in the photo at left shows a fan used as chopsticks to express the act of slurping udon noodles. The photo at right shows various types of fans.

Photo: Katsura Fukuryu Office

Long sword (tachi) signed Yasutsuna (The celebrated Doujigiri Yasutsuna)



Considered one of the greatest masterpieces of all Japanese swords, the *Dojigiri Yasutsuna*, signed by swordsmith Yasutsuna (Collection of the Tokyo National Museum)

Photo: ColBase (<https://colbase.nich.go.jp/>)

The long sword signed by swordsmith Yasutsuna, the celebrated *Dojigiri Yasutsuna*, is a National Treasure, a famous sword widely known for its appearance in a legend as the weapon used to kill an ogre called Shuten Doji. According to one version of the legend, such ogres were greatly troubling people with their evil actions in the imperial capital of Kyoto during the time of Emperor Ichijo, the 66th emperor of Japan, who reigned from 986 to 1011. This was around the time when Murasaki Shikibu,¹ the author of *Genji Monogatari* (“The Tale of Genji”), was active. According to the story, this led Minamoto no Yorimitsu,² who was a noble with the position of *busho* military commander, to take action. Yorimitsu and his troops tracked down these ogres, and he killed Shuten Doji, the leader of ogres with this long sword.

The sword was crafted by Yasutsuna, a famous swordsmith thought to have been active around the mid or late Heian period (late 8th century to late 12th century), according to different theories. It is considered one of the five greatest masterpieces of all Japanese swords. With a blade measuring 80 cm in length with a 2.7 cm curve, it features a beautifully curved form, as well as a slightly irregular *hamon*³ pattern displaying complex variations.

The sword has been owned previously by famous military commanders, including Toyotomi Hideyoshi, and the first two shoguns of the Edo shogunate⁴, Tokugawa Ieyasu and Hidetada. It is currently in the Tokyo National Museum’s collection.

1. Estimated to have lived from 970s to 1010s.
2. Considered to have lived from 948 to 1021. He is thought to have been a close adviser of Fujiwara no Michinaga (966 to 1027 or 1028), who took the position of *sessho* (regent).
3. A type of pattern appearing on Japanese sword blades. They feature a variety of different forms depending on the school of sword-making or the particular swordsmith.
4. Also known as the Tokugawa Shogunate, it was the Shogunate of the Edo period.

Scene from *Shuten Doji Emaki* (“Shuten Doji Picture Scroll”; Collection of the Tokyo National Museum)

The famous *Dojigiri Yasutsuna* Japanese sword has appeared in Japanese *emakimono* since ancient times. (*Emakimono*, or *emaki*, is a Japanese painting form. These picture scrolls feature serial scenes from legends, tales, and so on, with multiple sheets of paper joined to form very long, horizontal canvases.)

Created from ColBase’s photo (<https://colbase.nich.go.jp/>)



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