

Shiretoko World Natural Heritage Site Conservation Project Supported by Daikin Industries

(July 2019–June 2020)

(1) Project to Restore Rich Diversity of Shiretoko's Forests

1-1. The 100 Square-Meter Forest Movement Trust and Related Projects

The 100 Square-Meter Forest Movement Trust (organized by Shari Town) purchased land formerly set aside for agricultural and forestry development in Shiretoko, Hokkaido to restore the native forests that once grew there. This initiative, which began in 1977, completed the purchase of land after receiving support from countless individuals. From 1997, full-fledged reforestation activities were launched on the land that was purchased (Trust Lands).

This project is now expanding its forest restoration efforts to all of the Trust Lands following its efforts to restore nature along the Iwaobetsu River flowing through the Trust Lands and its river basin conducted in the phase one period from 2011 to 2015.

During the phase two period spanning from 2016 to 2024, the project will grow and plant broadleaf trees and conifers as well as repair deer fences and tree bark protectors installed in the past to stop Ezo deer that posed an obstacle to forest restoration. In addition, afforestation work will be conducted on bamboo grass areas and artificial forests that occupy around 25% of the 860 hectares of Trust Lands. This will mark a step forward in restoring the forest to before development for agriculture and forestry.

1-1-1. Restoration of Mixed Forest

From spring to autumn, seedlings were grown and planted, and deer fence was repaired to protect the trees from deer. In July, heavy machinery was used, following a similar effort last year, to plow and remove bamboo grass. Other plant life cannot grow in soil covered by bamboo grass; therefore, this work encourages the renewal of new trees and forest. This year, which marks the third, bamboo grass was removed at a 0.5 hectare site along the Shiretoko Odan Road. The location in 2017 where work initially began is already beginning to see the growth of small seedlings of broadleaf trees, such as willow and Japanese white birch (photos 1-1 to 1-4).

Initiatives are also underway at the Iwaobetsu River to restore the river's ecosystem, including restocking the masu salmon population that once resided there. This year a

survey was conducted with the assistance of Hokkaido University to better understand the population distribution of American mink, an invasive non-native species, on the Shiretoko Peninsula. Since mink mainly live around water spaces, the DNA contained in river water was analyzed and found mink DNA in two of the more than 40 rivers surveyed. There are witness reports of mink sightings in the past along these two rivers. This data supports these sightings and confirms that mink do indeed live in the region even today (photo 1-5).

In 2021, this project will mark its 10th anniversary since the start of the phase one period. Ahead of this milestone, efforts have begun on science-based analysis using aerial photographs taken from a drone to measure forest growth amounts and CO2 reduction amounts to determine results to date. In preparation, a meeting was set up this winter for partners ASM's Lab at Yokohama National University and Daikin Industries to confirm the future schedule. The plan calls for aerial photographing and analysis to be carried out in 2020 and publication of the results in 2021 (photo 1-6).



Photo 1-1. Transplanting medium-sized seedlings (May 22, 2019)



Photo 1-2. Deer fence after repair work (May 17, 2018)



Photo 1-3. Removing bamboo grass with heavy machinery (July 16, 2019)



Photo 1-4. Immature goat willow tree planted at the site of a previous bamboo grass removal (August 22, 2019)



Photo 1-5. River where water was collected for DNA analysis (September 13, 2018) *Collection in 2018



Photo 1-6. Meeting held in Yokohama (February 18, 2020)

1-1-2. Hosting of Employee Volunteers from Daikin Industries

The 16th Daikin Industries Shiretoko volunteer event was held from September 19 to 22. Eleven participants attended the event to transplant Sakhalin fir seedlings and repair deer fence. The 17th volunteer event was held in February 2020, which marked the second time the event was held in winter. Despite the program being shortened by one day to three days and two nights due to inclement weather, the eight participants helped with deforestation work for the Japanese spruce nursery in the middle of winter (photos 1-7 to 1-10).



Photo 1-7. Transplanting Sakhalin fir seedlings (September 21, 2019)



Photo 1-8. Repair of deer fence (September 20, 2019)



Photo 1-9. Deforestation work at Japanese spruce nursery site (February 2, 2020)



Photo 1-10. Walking the area after work (February 2, 2020)

(2) Project to Protect and Pass on Shiretoko's Value as a World Heritage Site

2-1. Activities for Passing on Shiretoko's Forests to Future Generations

This project supports nature learning activities for local children with the aims of passing on the values and appeal of Shiretoko as a World Natural Heritage, as well as fostering human resources crucial to the conservation of Shiretoko's nature in the future.

Efforts are being made to enhance understanding and visibility of the 100 Square-Meter Forest Movement Trust by actively visiting all levels of schools in Shari Town and its vicinity to lead classes and accept on-site visits. In addition, lectures on the topic of forestation are given at the Shiretoko Nature Center to promote the activities and philosophy of 100 Square-Meter Forest Movement Trust to the general public.

2-1-1. Supporting Environmental Education for Children

Shiretoko Museum in Shari Town hosts the Shiretoko Museum Kids event once a month. In June, a nature observation event was held along the rivers of Shiretoko. In addition, elementary schools in Shari and Rausu towns organized presentations on Shiretoko's nature during comprehensive learning period. This fiscal year a river observation class was held as for sixth graders at Asahi Elementary in Shari Town. During the session, children wore waders that were purchased using a donation from Daikin Industries in 2017. Each year the children rave about the experience of observing living things up close while being in the water with adult leaders (photos 2-1 an 2-2).

The exchange program between Shiretoko Kids of Rausu Town and Shiretoko Nature Loving Youth Group in Shari Uroto, which was launched in 2015, held a shoreline cleanup in Rausu Town in June and creature learning program in the shallow waters at Cape Chashikotsu in Utoro in July. With both programs seeing less participants than years in the past, there was no expenditure from donations.

A picture book creation project was initiated to convey to the general public the history of forests and development in Shiretoko and the current reforestation projects taking place there. Many meetings were held with picture book author Nobuko Akashi (resident of Shari Town) to develop a rough draft for the picture book, which is planned to be completed in 2021, the project's 10th anniversary.

With the publishing of the picture book, we hope to spread the word about the reforestation activities taking place in Shiretoko to many readers.



Photo 2-1. Shiretoko Museum Kids' river observation of fish



Photo 2-2. Comprehensive learning period of sixth graders at Asahi Elementary School in Shari Town

The project hosted experience-based learning mainly for local schools to promote initiatives for Shiretoko's nature and the 100 Square-Meter Forest Movement Trust.

In July, a presentation on the area's development and the Trust was made to 59 fourth graders at Shari Elementary School. The following week, students were brought to the Trust Lands as part of experience-based learning, where they visited houses from the pioneer period and actual reforestation work sites (photos 2-3 and 2-4). Moreover, an overnight stay at a pioneer house for children of the Utoro Shiretoko Nature Loving Youth Group was scheduled in March, but it was cancelled due to COVID-19 pandemic.



Photo 2-3. Fourth graders of Shari Elementary School visiting the pioneer house (July 10, 2018)



Photo 2-4. Eighth graders of Utoro School during a vocational experience (July 5, 2018)

2-1-2. Activity to promote initiatives for nature conservation and forest restoration to visitors of Shiretoko

The project developed a promenade for the opening of *Shiretoko Morizukuri no Michi* to the general public, a walking trail built within the Trust Lands. *Shiretoko Morizukuri no Michi* features the Deer Fence Trail and Pioneer House Trail. These trails were created for visitors to learn about the pioneer history, actual process of forest development, and the environment in the Trust Lands.

This year a pilot program was launched to provide a lecture on reforestation at Shiretoko Nature Center and guided walk along the Deer Fence Trail. Altogether the program spans one and one half hours. This program was held a total of five times with 45 people attending. The 20-minute Staff Talk on reforestation at Shiretoko Nature Center held during the high season every year was conducted eight times with 87 people in attendance.

The Pioneer House Trail, which welcomes many visitors throughout the year, is also a snowshoe course in the winter. This year, 2,174 people visited the trail (photos 2-5 and 2-6).

To improve the appeal of the 100 Square-Meter Forest Movement Trust House, which is the starting point of *Shiretoko Morizukuri no Michi* and exhibition site of the 100 Square-Meter Forest Movement Trust, creative efforts have been put into the exhibit to make the route easy to follow. Moreover, as the entrance becomes obscured due to snow accumulation, a new signboard was installed that makes it easier to tell if the exhibition hall is open during periods of heavy snow. A counter has been installed to track the number of visitors at the entrance and exit on a trial basis to gather baseline data for improving user services in the future. A comment area is also set up to welcome any visitor feedback.



Photo 2-5. Pioneer House Trail in early summer (June 14, 2019)



Photo 2-6. Pioneer House Trail in winter (February 2, 2020)

This year marks the 40th anniversary of Shiretoko Nature Classroom which first began in 1980. In this milestone year, two events were held to continue passing on Shiretoko's nature and the Trust to future generations. During the work camp held in July, nine people participated in building a tree deck at the camp site used for nature classrooms. At the 40th anniversary event for the nature classroom held in October, 50 past participants gathered to work on the completion of the tree deck and spent four days in camp to share their thoughts and ideas on the future of Shiretoko, while deepening their connections (photos 2-7 and 2-8).



Photo 2-7. Tree deck installation at the work camp in July (July 6, 2019)



Photo 2-8. 40th anniversary event for Nature Classroom (October 18, 2019)

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