



HOKKAIDO TOKACHI SHIKAOI GEOPARK

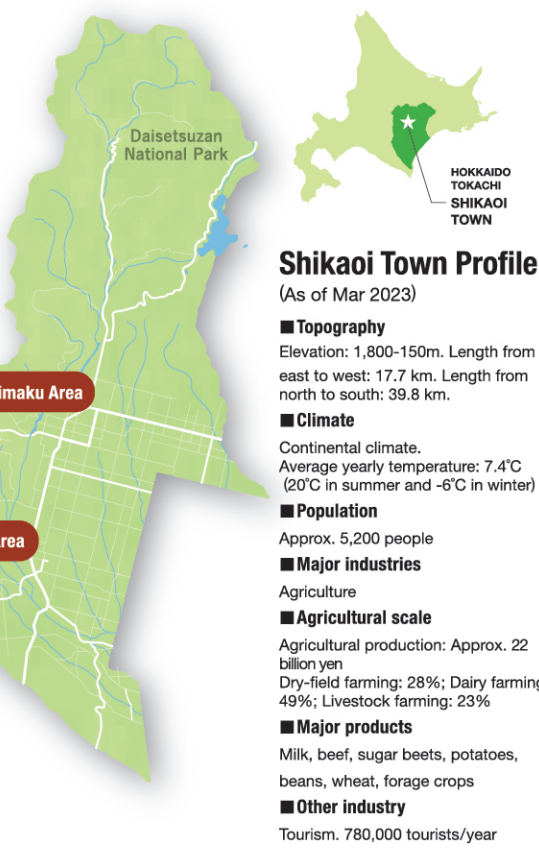
A story of life nurtured by volcanoes and freezing landscape

Tokachi Shikaoi Geopark

Clusters of lava domes, areas of permafrost, and vast plains are among the defining features of Tokachi Shikaoi Geopark, which makes up part of Daisetsuzan National Park and covers the town of Shikaoi in central Hokkaido. The geopark also supports rare species of plants and animals, such as a subspecies of the northern pika. Volcanic activity and a cold climate have influenced all aspects of Tokachi Shikaoi Geopark, from the topography and biodiversity to the area's cultural heritage.

The park offers insights into the geological evolution of Hokkaido with a focus on the Shikaribetsu volcanic group in northern Shikaoi and the Tokachi Plain to the south. Visitors can see evidence of geological processes and observe periglacial phenomena such as freeze-thaw-weathered slopes and windholes that vent cold air in summer and warm, moist air in winter. The park also offers a range of activities including guided walks, canoe excursions, and hot-air balloon rides.

The park covers a total area of approximately 405 square kilometers. It is one of several geoparks in Hokkaido, which also include the UNESCO Global Geoparks of Toya-Utsu and Mt. Apo.



Shikaoi Town Profile

(As of Mar 2023)

- **Topography**
Elevation: 1,800-150m. Length from east to west: 17.7 km. Length from north to south: 39.8 km.
- **Climate**
Continental climate. Average yearly temperature: 7.4°C (20°C in summer and -6°C in winter)
- **Population**
Approx. 5,200 people
- **Major industries**
Agriculture
- **Agricultural scale**
Agricultural production: Approx. 22 billion yen
Dry-field farming: 28%; Dairy farming: 49%; Livestock farming: 23%
- **Major products**
Milk, beef, sugar beets, potatoes, beans, wheat, forage crops
- **Other industry**
Tourism. 780,000 tourists/year



sightseeing information

Shikaoi Tourist information
2, Higashi-machi 3-chome, Shikaoi, Kato-gun, Hokkaido
TEL:0156-66-2311 <https://www.shikaoi.net/>

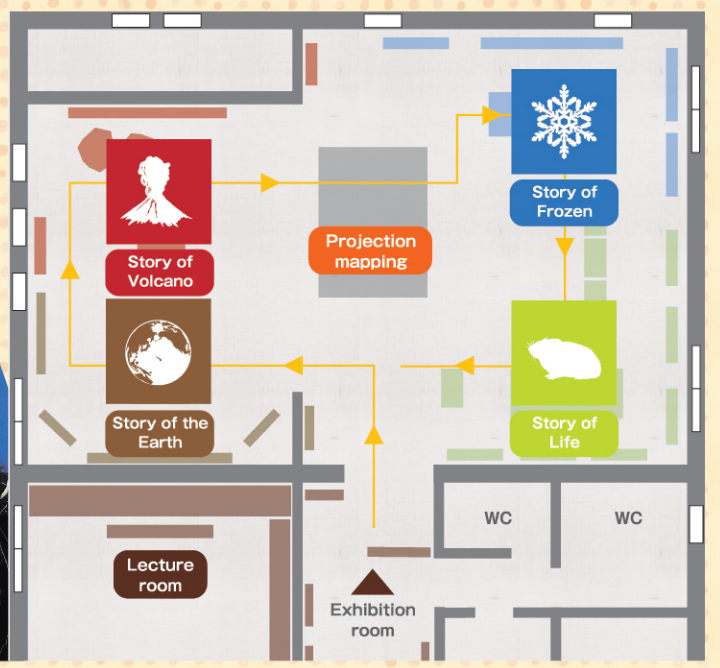


Welcome to Tokachi Shikaoi Geopark

Open: 9:00-17:00
Closed: Tuesdays and the day after national holidays, the New Year's holiday

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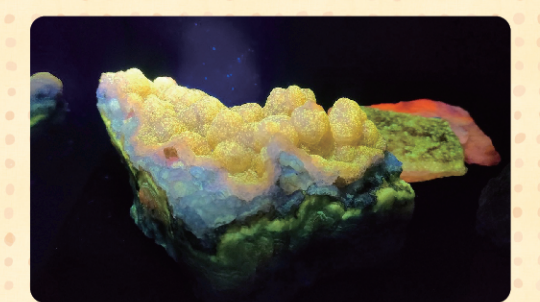
The park offers insights into the geological evolution of Hokkaido with a focus on the Shikaribetsu volcanic group in northern Shikaoi and the Tokachi Plain to the south. Among the park's most interesting features are periglacial phenomena and evidence of geological processes, such as freeze-thaw-weathered slopes and windholes that vent cold air in summer and warm, moist air in winter. The park also offers a range of activities including guided walks, canoe excursions, and hot-air balloon rides.



Tokachi Shikaoi Geopark Visitor Center

Learn about the geology, history, and wildlife of the park through dioramas, displays, and interactive exhibits. Discover what guided activities and experiences are available, and get practical information from geopark staff about hikes, weather conditions, and seasonal sights. The Tokachi Shikaoi Geopark Visitor Center has information on all aspects of the park, and expert staff are available to offer advice and answer questions.

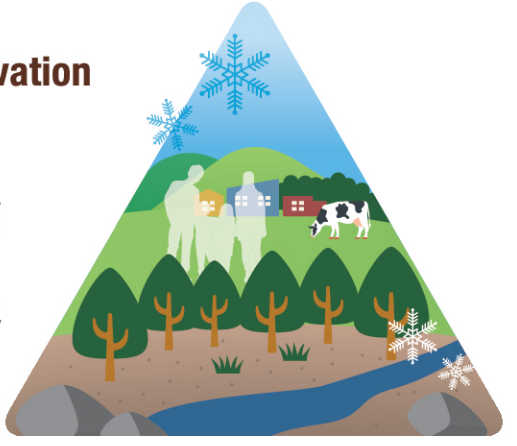
Exhibitions introducing the park are organized under four key themes: The Creation and Evolution of Landforms; Volcanoes and Volcanic Activity; The Effects of a Cold Climate; and Life in the Park. Displays begin with plate tectonics and the formation of key landforms, then focus on volcanic activity and its effect on the landscape. Later panels and exhibits introduce the cold-climate environment of the park and its ecosystems, which support rare species such as the Miyabe char, a fish not found anywhere else in the world.



New Mineral "Hokkaidoite" Discovered in Shikaoi Town

Geoparks—Promoting Conservation and Sustainable Development

There are many sites of significant geological importance throughout Japan that tell the story of the Japanese archipelago and provide insights into the evolution of the planet. Geoparks conserve the unique geological, natural, and cultural heritage of such areas. They also help visitors understand our intimate relationship with Earth and the current environmental challenges the planet faces.



Tokachi Shikaoi Geopark makes up part of Daisetsuzan National Park and covers the town of Shikaoi. It includes clusters of lava domes, areas of permafrost, and vast plains, as well as rare species of plants and animals such as a subspecies of the northern pika. The park is one of several geoparks in Hokkaido, which also include the UNESCO Global Geoparks of Toya-Utsu and Mt. Apo.



TOKACHI SHIKAOI GEOPARK COUNCIL
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SUSTAINABLE DEVELOPMENT GOALS **ZERO CARBON HOKKAIDO SHIKAOI**

A story of life nurtured by volcanoes and freezing landscape



Born of Fire
Volcanic activity has shaped the landscape of Tokachi Shikaoi Geopark. Over the course of a million years, eruptions caused land to form where there had once been sea, new mountains to be born, and Lake Shikaribetsu to be created through the damming of a river.

New mountains emerg
The mountains around Lake Shikaribetsu are made up of stratovolcanoes and lava domes from different periods, forming the Shikaribetsu volcanic group. Kita-Petoutoru (1,400 m) and Minami-Petoutoru (1,348 m) are the oldest. Their formation began in approximately 300,000 BP—around the time modern humans evolved—and continued for 200,000 years. Both mountains are stratovolcanoes, built up through repeated eruptions of slow-moving low-viscosity lava. The younger mountains date from between 60,000 and 10,000 BP. These are lava domes, which form when sticky, viscous lava accumulates around a vent without flowing away. Many of the lava domes around the lake have rocky slopes with rock fragments of uniform size caused by a combination of freeze-thaw weathering and friction-induced fragmentation. Nishi-Nupukaushinupuri (1,254 m) and Higashi-Nupukaushinupuri (1,252 m) are the highest of the four lava domes, which also include Hakuunzan (1,187 m) and Tenbozan (1,173 m).

A lake is born
Shikaribetsu's lava domes have had a significant impact on the landscape. As they formed, they blocked the path of a river. The gradual damming of the river resulted in Lake Shikaribetsu. The lake covers 3.4 square kilometers and has 13.8 kilometers of shoreline, but the original lake would have been larger and extended farther north and west. The damming of the river was temporary as the water eventually found an alternative outlet through a valley that formed southwest of the lake. The landforms of the Shikaribetsu area are tangible examples of the powerful forces that sculpted the landscape of the geopark.



Shaped by the Cold
Snow and ice affect all aspects of the geopark, from its landforms and ecosystems to the lives of the people that live in Shikaoi. Windholes, a unique feature of the park, help to preserve patches of permafrost in the mountains around Lake Shikaribetsu. The permafrost in Tokachi Shikaoi Geopark is some of the southernmost in the Northern Hemisphere and is found at relatively low elevations, where it is uncommon outside of the Arctic.

Block slopes and windholes
Large, angular rock fragments of almost uniform size cover the slopes of many of the Shikaribetsu lava domes that were active during the last ice age (80,000–10,000 BP). The rocky slopes, or "block slopes," are the result of the lava cooling process and ongoing freeze-thaw weathering. Networks of windholes have formed on these frost-shattered slopes, creating a natural cooling system that regulates the climate of the slopes and allows them to support species typically limited to sites farther north or at higher elevations. Hikes through the mountains of Shikaribetsu offer views of these vast slopes. The approach to the summit of the tallest of the Shikaribetsu lava domes, Higashi-Nupukaushinupuri (1,252 m), passes clusters of windholes.

Winter spectacles
Snow covers the ground in the Shikaribetsu area throughout much of winter. Lake Shikaribetsu freezes over in December and remains fully frozen until around mid-April. Each winter, the Shikaribetsu-Kotan igloo village is created on the frozen lake, featuring attractions such as an ice bar, an ice chapel for weddings, an ice hall for concerts, ice lodges, and an open-air hot spring. Winter in Tokachi Shikaoi Geopark also features other seasonal events and activities, such as snowshoeing and wildlife watching.



Biologically Diverse
The diverse landforms of Tokachi Shikaoi Geopark support a wide range of habitats and species. The vast Tokachi Plain with its tillable, ash-rich soil has long allowed agriculture to flourish. The Shikaribetsu mountains north of Shikaoi have rich ecosystems and micro-ecosystems with diverse moss and lichen species as well as uniquely evolved and relict animal species.

A relic of the ice age
The windhole-dotted mountain slopes around Lake Shikaribetsu are home to a subspecies of the northern pika, a cold-climate mammal typically found only in northern regions of the Eurasian continent. Pikas are closely related to rabbits and hares. The Ezo pika, or Ezo nakiusagi is a subspecies endemic to Hokkaido and is about the size of a human fist, with a weight of around 120 grams. The animal is a vestige of the ice age, evolved from the northern pika, which likely migrated to Hokkaido via a land bridge connecting Hokkaido and Sakhalin to the continent. The windholes in the mountains of Shikaribetsu sustain a sufficiently cold environment and support the growth of alpine vegetation, such as Labrador tea, which is an important food source for the Ezo pika.

Evolved to adapt
The Miyabe char of Lake Shikaribetsu is a fish not found anywhere else in the world. This subspecies of *Salvelinus malma*, known as the Dolly Varden trout, has evolved in response to changes in its environment brought about by volcanic activity. The formation of Shikaribetsu's lava domes tens of thousands of years ago dammed the river running through the area, creating Lake Shikaribetsu and isolating the char. The fish had to adapt to a harsh new environment at a high elevation and with very limited food sources. Plankton became the species' primary source of nutrition, and in order to effectively process it, the fish evolved additional gill rakers—the Miyabe char has 26, while the Dolly Varden trout has 21 or 22.



とちかち志賀高原ジオパーク

TOKACHI SHIKAOI GEOPARK MAP

- ★ GEOSITE
- 🏠 GEOPARK VISITOR CENTER
- 🚻 TOILETS
- ℹ️ INFORMATION CENTER
- P PARKING
- 🛢️ PETROL STATION

- 1 Mouth of the Yanbetsu River**
The delta is growing
※Only from July to September
P
- 2 Lake Shikaribetsu**
Natural dammed lake
P
- 3 Shikaribetsuko-Kotan**
A world of only snow and ice
※Only from late January to early March
P
- 4 Mt. Higashi-Nupuka ushinupuri(1,252m)**
A forest nurtured by volcanoes and frost
P
- 5 Mt. Nishi-Nupuka ushinupuri(1,251m)**
The mountain with the oldest ice in Japan
P
- 6 Volcano observatory**
- 7 Senjokuzure**
Block slopes(Talus slopes)
P
- 8 Mt. Nishi-Nupuka ushinupuri(1,251m)**
Panoramic view of the Tokachi Plain
P
- 9 Oigahara Observatory**
- 10 Nishi-urimaku pyroclastic flow outcrop**
Pyroclastic flow deposit 1 million years ago
P

5 Shikaribetsu windholes area

Places with holes that spew cold winds even in summer.

10 Higashi-urimaku Hummocky hills

Small hills created by volcanoes

Shikaoi's Rail Heritage

- 13 Former crossing bridge of the Takushoku Railway and the Kasai Railway**
- 14 Former Kasai-railway Shikaoi station**
- 15 Former Takushoku-railway Shikaoi station**

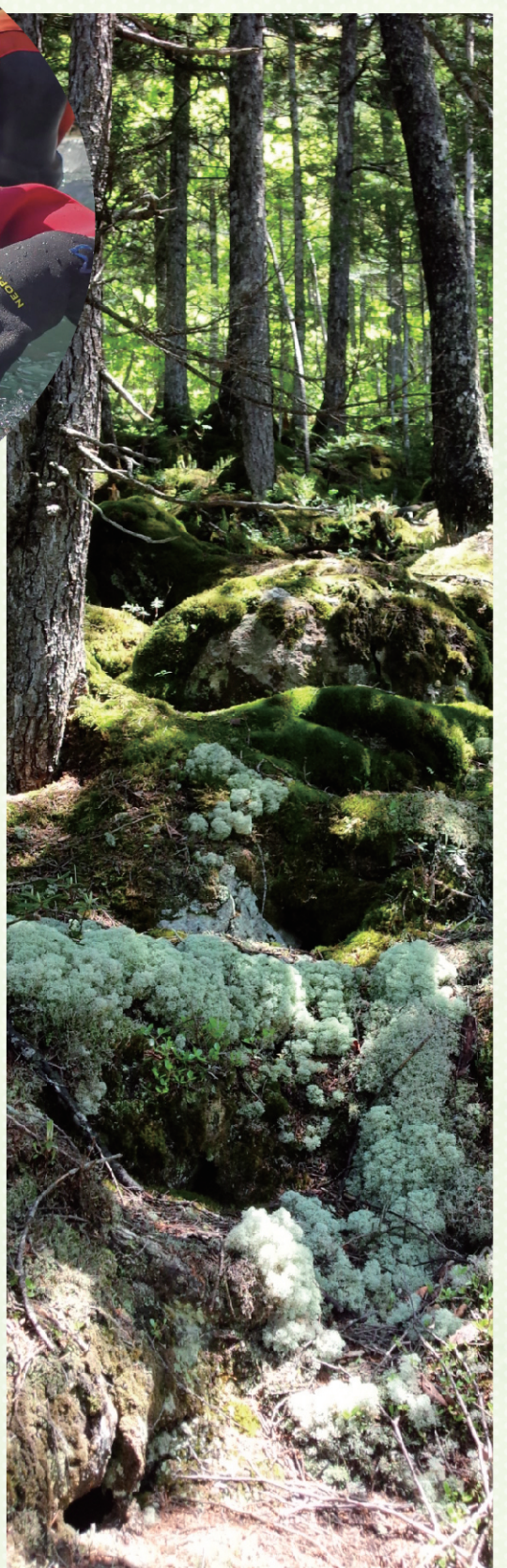


Activities & Experiences

Explore Lake Shikaribetsu in a canoe, hike the crater rim of a collapsed volcano, or spot wildlife on walking tours of the park's forests, rivers, and freeze-thaw-weathered mountain slopes. Local guides and tour operators offer a wide range of experiences that introduce the unique geological, natural, and cultural heritage of Tokachi Shikaoi Geopark.

Many of the experiences are seasonal. Warmer-weather activities are typically offered between April and October, but Lake Shikaribetsu can stay partially frozen until around mid-May. At the Lake Shikaribetsu Nature Center, visitors can don watertight dry suits and join tours out onto the lake's ice floes between mid-April and early May. In winter, dogsledding tours operate across vast snowfields, and the Shikaribetsuko-Kotan igloo village opens on the frozen surface of Lake Shikaribetsu. The igloo village features an ice bar, an ice chapel for weddings, an ice hall for concerts, ice lodges, and an open-air hot spring bath. The igloo village event typically runs from the end of January to mid-March.

Information about these and other park activities is available at the Tokachi Shikaoi Geopark Visitor Center and the Lake Shikaribetsu Nature Center. Reservations are required for most tours and experiences.



Guide Company	Lake Shikaribetsu Nature Center Tel:0156-69-8181 E-mail:lake804m@gmail.com	Boreal-forest E-mail:info@boreal-forest.jp
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Rules for visiting the Geopark area
Our Geopark are precious. Rules are in place to protect the environment and for the safety of all visitors.

- Removing animals, plants, or stones from any area is strictly prohibited, as doing so may disrupt the natural balance of the area's ecosystems.
- Keep nature clean. Take your trash home with you. There are no toilets in the mountains. Bring a portable toilet bag if you are climbing the mountain.
- Do not feed wild animals. Feeding wild animals disrupts the ecological balance, and can cause animals to become aggressive, develop health conditions, or become dependent on humans for food. Changes in animal behavior due to feeding is a cause of road accidents, visitor injuries and other problems in the area.
- Do not deviate from the trail. Precious plants, animals, and mosses grow around the trail. Walk the trail without destroying their world.
- Unauthorized entry onto farmland is prohibited. Careless entry can lead to the introduction of pathogens into farmland. Observe from the road.

