

# Introduction to footpath routes

## Yosomi-yama Route

Recovered forest, ideal for bird watching and walking in the fresh air

Opening period: from early in May to late in November 10

Yosomi-yama (also known as Meiji-shinzan) is a crypto-dome (a hidden lava dome) thrust more than 110m into the air by the intruding magma during the 1910 eruption of Usu Volcano. The explosion was predicted as a result of precursory earthquakes, and around 15,000 people were able to evacuate before the start of the eruption. Nearly 45 craters opened up on the mountain's northern flank. The Yosomi-yama Route follows the 1910 craters and uplifted dome, which are now completely covered by recovering forest 100 years later. Steam is still emitted from the mountain, symbolizing the birth of the Toyako-Onsen Hot Springs from 1910 eruption. This route is also great for walking in the fresh air and bird watching.

### Observation points along the footpath route

#### 1 Observation Point 1: Craters formed by the 1910 eruption

Courses: A, B, C

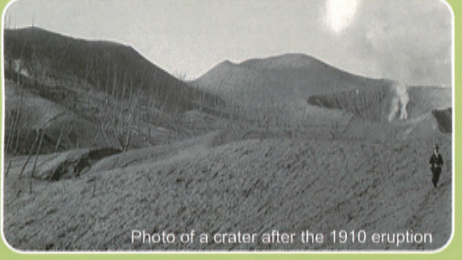


Photo of a crater after the 1910 eruption

The 1910 eruption caused 45 craters to form. A century later, they are now covered with forests.

#### 2 Observation Point 2: Fumarole

Courses: A, B, C



A remaining steam vent on the uplifted fault scarp of Yosomi-yama. The steam temperature is currently around 50°C.

#### 3 Observation Point 3: Observatory at the top of Yosomi-yama

Courses: A, B, C



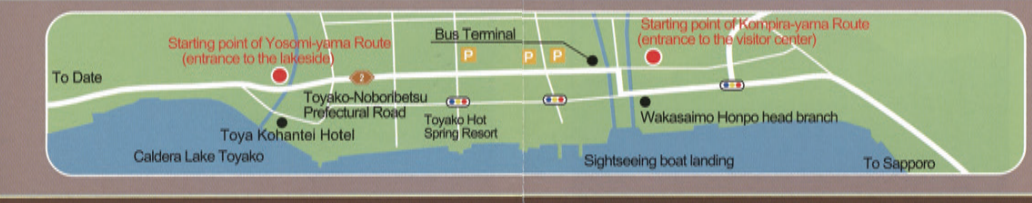
Panoramic view of Caldera Lake Toyako, and the recovering forests of Yosomi-yama. Around 110,000 years ago, a gigantic caldera-forming eruption created Caldera Lake Toyako, and the Nakajima (central islands) dome complex emerged around 50,000 years ago.



[Basis of this map]  
This red relief topographical map is based on air laser mapping using modern technology, and clearly illustrates the precise topography of craters and valleys even in the shade. Steep and gentle slopes are shown in red and white, respectively.

**Access to starting points**

Please see the map on the right to find out how to access the starting points of the Yosomi-yama and Kompira-yama Routes.



**Legend**

- : Observation point
- P : Parking lot
- 🚲 : Parking lot for bicycles
- WC : Restroom
- : Route improved after the 2000 eruption
- ⋯ : This area is steeply inclined or very hard to walk on. (Use of the route is subject to weather conditions.)
- Ⓜ : Distance (m) and time (minute) on foot between blue pines
- : Footpath starting/finishing point
- : Gate
- ☄ ☄ ☄ : Craters; erupted in 1910, 1977 and 2000 from left to right

## Kompira-yama Route

A feeling of coexistence with the volcano

Opening period: April 20 to November 10  
Opening hours: 7:00 to 18:00

The Kompira-yama Route provides an exciting trail that showcases the natural wonder of the 2000 eruption and the resulting impacts to society: craters, faults, deposits of ash, hot mudflow and hazard materials. The eruption occurred in March 2000 after five days of precursory earthquakes, enabling people to evacuate before the event as with the 1910 eruption. The first eruption occurred at the western flank, with craters opening up the next day at Kompira-yama. Later, hot mudflow destroyed apartment and bridges.

### Observation points along the footpath route

#### 4 Observation Point 4: The ruined municipal bathhouse (Yasuragi no Ie)

Course: A



Yasuragi no Ie municipal bathhouse ruined by flowing hot mudflow

#### 5 Observation Point 5: Konomi Bridge

Course: A



Hot mudflow swept Konomi Bridge (which used to span National Route 230) a distance of 100 m from its original location.

#### 6 Observation Point 6: Sakuragaoka apartment complex

Course: A



The first floor of the Sakuragaoka apartment complex was buried in gushing hot mudflow from the eruption in 2000, and the second floor was scarred by Konomi Bridge as the photo shows.

#### 7 Observation Point 7: K-A crater (a.k.a. Yu kun)

Course: B



#### 8 Observation Point 8: K-B crater (Tama chan)

Course: B



During 2000 eruption, a series of craters were generated along faults that had repeatedly become active in the past around Kompira-yama. The major craters were nicknamed Yu kun and Tama chan, from the Chinese characters used in the name Usu.



# Mudflow disasters and changes to Toyako Onsen (hot spring resort)

Source: Junior high school student version of "Utsu no Yama no Kanade," an educational supplementary reading resource for Utsu volcanic disaster prevention (Produced/published by the Examination and Production Committee on Educational Supplementary Reading Resources for Mt. Utsu Volcanic Disaster Prevention: published in March 2004)



1931



This photo shows that the alluvial fan on the north side of Utsu Volcano where Toyako Onsen is located, has developed since the early Showa era. Around 1940, this area hosted a golf course, farming fields and a municipal athletics field. Houses were also constructed, roads expanded and railways put into service.

Photo duplicated from the original owned by Etsuko Konishi of Boyotel Restaurant

1977 (before the eruption)



This aerial photo from before the 1977-1978 eruption shows how Toyako Hot Spring Resort sprawled around the alluvial fan, and that there were no rivers.

An aerial photograph by the Geographical Survey Institute (1977)

1978



Although the 1977-1978 eruption itself caused no casualties, three people were killed by mudflow triggered by rainfall on October 24, 1978.

An aerial photograph by the Geographical Survey Institute (1977)

1995



After the 1977-1978 eruption, erosion control facilities were constructed to protect Toyako Hot Spring Resort from mudflow and debris flow. These included an erosion control dam to mitigate mudflow on the upstream side of the resort area and channel work to safely discharge mudflow and floods.

An aerial photograph by the Geographical Survey Institute (1995)

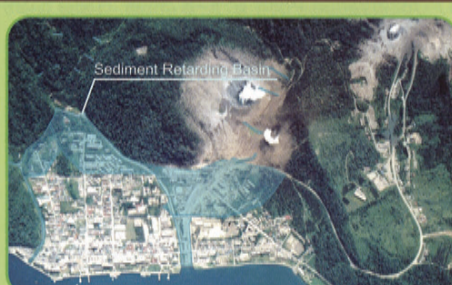
2000



The 2000 eruption created an eruptive crater near Toyako Hot Spring Resort from which hot mudflow discharged. Although mudflow in the early days was controlled by the erosion control facilities, the large amount of mudflow in 2000 caused damage to the resort area.

An aerial photograph by the Geographical Survey Institute (2000)

2000 (after the eruption)



After the damage, a large-scale sediment retarding area was built to protect Toyako Hot Spring Resort against sediment disasters. Apartment complexes and other buildings shown in blue on the map to the left were moved, and facilities to control sediment were built there.

An aerial photograph by the Geographical Survey Institute (2000)

# Major eruptions of Utsu Volcano

The 1910 eruption



At present, the crater is covered with dense forest. Immediately after the 1910 eruption. Around the crater immediately following the 1910 eruption. Photographed by Fusakichi Omori

The 1977-1978 eruption



The ash column of the 1977 eruption of Utsu Volcano about 40 minutes after the onset.

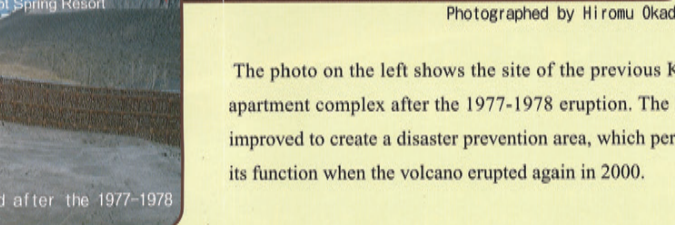
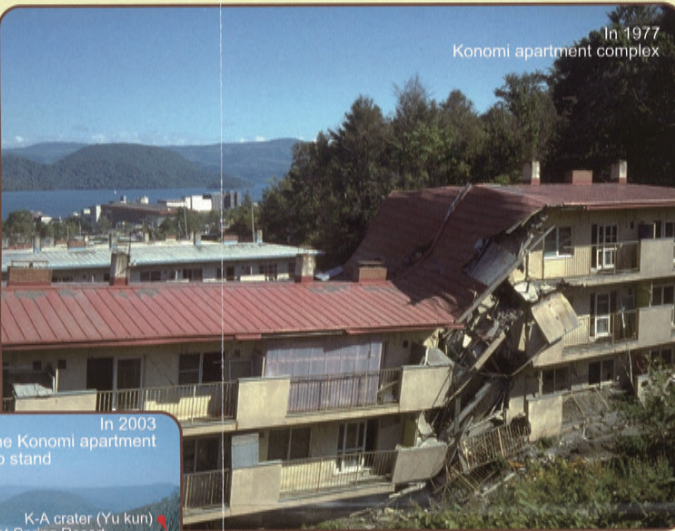
Source: "Volcanism and Environmental Hazards of Utsu Volcano," Hokkaido University Press

The 2000 eruption



Photographed by Hiromu Okada

An apartment building in the Konomi Valley was gradually destroyed by the active volcanic fault during the 1977-1982 activity of Utsu Volcano (right). This former residential area was transformed into an area of erosion control dams (left) that contributed to significantly reducing the damage from the 2000 eruption.



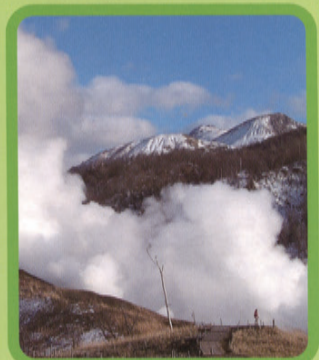
The photo on the left shows the site of the previous Konomi apartment complex after the 1977-1978 eruption. The lot was improved to create a disaster prevention area, which performed its function when the volcano erupted again in 2000.



Photographed by Hiromu Okada

# Foot Path Map Caldera Lake Toyako/Utsu Volcano

Yosomi-yama Route: craters and crypto-dome from the 1910 eruption and the recovering woods  
Kompira-yama Route: craters from the 2000 eruption, crypto-dome and hazard memorials



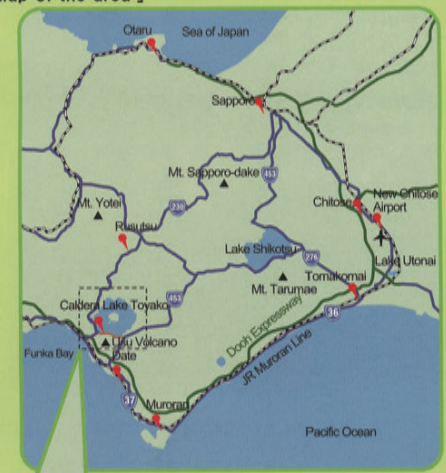
Firsthand information on visiting this attractive area that showcases the natural wonder of volcanic destruction and generation, including Caldera Lake Toyako and Utsu Volcano

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For more information, contact Toya Caldera and Utsu Volcano Global Geopark Council (secretariat: Toyako Town Office)  
Tel: 0142-76-2121 Website: <http://www.toya-usu-geopark.org>



[ Map of the area ]



■ When using JR Muroran Line (15 min. by bus from JR Toya Station):  
Approx. 1 hr. 40 min. by limited express from JR Sapporo Station  
Approx. 1 hr. 30 min. by limited express from JR Shin Chitose Kuko Station  
■ When using the Dooch expressway (toll):  
Approx. 15 min. from the Dooch expressway/Toya highway interchange  
■ When using highways (toll-free):  
Approx. 2 hr. 10 min. by car via National Route 230 from Sapporo: 2 hr. 40 min. by bus  
Approx. 3 hr. 30 min. by car via National Route 36/37 from Chitose