

## **A Wealth of Mountains**

Mountains define the park's terrain. They are scenic centerpieces of the region and towering monuments to the dynamic forces that have shaped the planet. Each of the park's mountains has a unique geological history and distinctive appearance, and together they bring extraordinary variety to the park landscape.

### How the Landscape Formed

Five million years ago, the Japanese archipelago looked quite different. Large areas of the landscape were covered by a shallow sea. In fact, much of the Kanto region (including Tokyo) was part of a huge underwater trench, known to geologists as the Fossa Magna. The Myoko-Togakushi area lay in the northern part of this trench.

Gradually, movements in the earth's crust (tectonic plates) and pressure from underground magma began pushing the seabed upward. This activity caused volcanic eruptions and landslides, which produced huge volumes of sediment. Rivers and other waterways then carried that sediment to the Fossa Magna, slowly filling in the trench.

Around 700,000 years ago, the sea in the Myoko-Togakushi area had completely dried up, and tectonic activity was intensifying. Just west of what is now the park boundary lies the Itoigawa-Shizuoka Tectonic Line, where the Eurasian and the North American continental plates meet. Opposing tectonic forces along that fault line forced the land to crumple and rise upward, creating non-volcanic mountains such as Mt. Hiuchi and the Mt. Togakushi range. The first volcano in the Myoko Volcanic Group, Mt. Madarao, also formed during this time.

Roughly 340,000 years ago, volcanic eruptions began for the rest of the Myoko Volcanic Group. Mt. Iizuna erupted first, followed by Mt. Myoko around 300,000 years ago. Then, 250,000 years ago, Mt. Kurohime followed suit. Mt. Yakeyama is a relative newcomer whose first eruption was only 3,100 years ago.

### Volcanic Mountains

- Mt. Yakeyama (2,400 m): Active; status monitored regularly
- Mt. Myoko (2,454 m): Active; emits volcanic gas
- Mt. Kurohime (2,053 m): Inactive
- Mt. Iizuna (1,917 m): Inactive

### Non-Volcanic Mountains

- Mt. Amakazari (1,963 m)
- Mt. Hiuchi (2,462 m)

- Mt. Takatsuma (2,353 m)
- Mt. Togakushi (1,904 m)

### Hitome Gozan: Countless Views of Many Mountains

The density and diversity of mountains in the park has given rise to the term *hitome gozan*, a phrase that literally means “five mountains in a single glance.” The phrase does not refer to five specific mountains, but rather to the fact that in the Myoko-Togakushi area, any given view of the horizon is filled with multiple peaks.

### Find Your Own Hitome Gozan

As the idea of *hitome gozan* implies, the park offers a wealth of mountain views. In 2017, a competition called “Stunning Views of *Hitome Gozan*: 32 Selections” was held. In honor of the designation as Japan’s thirty-second national park, 32 pictures were chosen. They highlight the mountains in many different locales, seasons, weather, and lighting conditions, and no view is ever duplicated. Whether visitors seek to capture the landscape with a camera or simply the mind’s eye, the mountains of Myoko-Togakushi renzan National Park hold unlimited variety and potential.

### Getting to Know the Park’s Mountains

From the twin peaks of Mt. Amakazari to the jagged cliffs of the Togakushi mountain range and rolling slopes of Mt. Myoko, Mt. Kurohime, and Mt. Iizuna, mountains in the park have many distinctive shapes. Their variety comes from the different geological processes that formed them, and the unique appearance of several of the mountains has made them objects of mountain worship for many centuries.

Learning the names and shapes of the park’s peaks will help you identify them when you head into the field.

### **Formation of Mt. Myoko**

Mt. Myoko is a stratovolcano—a conical volcano formed from many layers of hardened lava, ash, and scoria (volcanic rock). It was created in four main stages, called “generations.”

#### Fourth Generation, Phase 1

(around 40,000 years ago)

When the fourth generation of its formation began, Mt. Myoko looked very different than it does today. The mountain had a conical shape like that of Mt. Fuji, and its

summit stood between 2,700 and 3,000 meters high.

#### Fourth Generation, Phase 2

(around 20,000 years ago)

At this time, explosions of pressurized steam shattered the mountaintop. This was followed by a tremendous collapse—the center of the volcano sank inward, creating a horseshoe-shaped caldera. The caldera's outer edge (the volcanic rim surrounding Mt. Myoko's modern summit) includes peaks like Mt. Akakura and Mt. Mae.

#### Fourth Generation, Phase 3

(around 6,000 years ago)

During this phase, volcanic rock and ash spewed from the center of the caldera, forming a cinder cone. Gradually, viscous lava flowed out, then cooled and hardened into the central lava dome that is Mt. Myoko's modern summit.

#### Fourth Generation, Phase 4

(around 5,000 years ago)

Lava continued to flow intermittently from the summit, culminating in a massive eruption of pyroclastic material (volcanic rock, ash, and heated gas) around 5,000 years ago.