Active Volcanoes in Kuju

①How long have the volcanoes been active?

It is said that they have been active for 200,000 years except for Waita volcanic belt, which was active from about 1,000,000 to 300,000 years ago. Compared with the volcanoes in Aso, which have been active for 300,000 years, those in Kuju are relatively young. Among Kuju volcanoes, Mt.Ryoshi and Mt.Kuroiwa are the oldest and Mt.Kurodake is the youngest.

In Kyushu, Mt.Aso in Kumamoto, Sakurajima in Kagoshima, and Mt. Heiseishinzan in Nagasaki are famous as active volcanoes. The Kuju Range in Oita has also active volcanoes, from which steam is coming up still now.

In 1995, one of the volcanoes in Kuju erupted and steam rose up to 1,000m. Even in Oita city the steam could be seen. In Kumamoto city, the ash fell down from the sky.

Here, we introduce the history of the volcanoes in Kuju.

②When did the worst eruption occur?

The worst eruption occurred about 40,000,000 years ago. The pyroclastic flows as thick as at most 200m covered the north part of Handa plateau and the south part of Kuju plateau completely. The steam plume was said to have reached as high as 10km high. The blowout point could not be identified exactly, but it is assumed to have been the area around Mt.Kuju, Mt.Hossho, and Mt.Mimata. It is dreadful if this kind of eruption occurs today!

③Which is the youngest volcano?

Mt.Kurodake, which is about 1600 years old, is said to be the youngest one in Kuju. Mt.Kurodake is covered with the deep forest, which is rare in Kuju. Mt.Kurodake has several features which can be found in a young mountain:

- There are many big rocks between which there are big gaps. The soil has not developed further.
- The dissection of the mountain has not proceeded well and there are few erosional valleys.

④What are there beneath the Kuju Range?

Great amount of volcanic rocks of various periods are buried underneath the Kuju Volcanoes. Especially the buried caldera whose center is in Kyusuikei is well-known. It is called "Shishimuta caldera", and its diameter is about 8km. Unfortunately, we cannot recognize its shape now. This area used to be a volcano which caused vigorous eruptions with pyroclastic flows twice about 1,000,000 and 900,000 years ago. The tephra deposits of these eruptions reached as far as Kanto area, and accumulated in Osaka as thick as some 10cm!

Kuju volcanoes and Shishimuta caldera are said to have no direct connection, but they are surely neighbors. Is it possible Mt.Kuju will erupt vigorously like Mt.Aso and Shishimuta caldera did some day??

The blessings from volcanoes

(Photo by Kyusyu Power Plant)

Geothermal

Kuju has several geothermal plants. The biggest one is "Hacchobaru Plant", whose output is 110,000kw. This can cover the electric power for 37,000 general households.

Steam

People in Handa plateau predict the weather by the steam from Mt.Io. They say the smoke going up straight is the sign of a fine weather, and the one coming down forward is the sign of rain.

Hot springs

Hot springs accompany volcanoes! Around Kuju, there are various hot springs, such as Hokkein, Ukenokuchi, Sujiyu, Yutsubo, Kurokawa, Kuju, Hichirida, Nagayu, Yunohira, and so on.

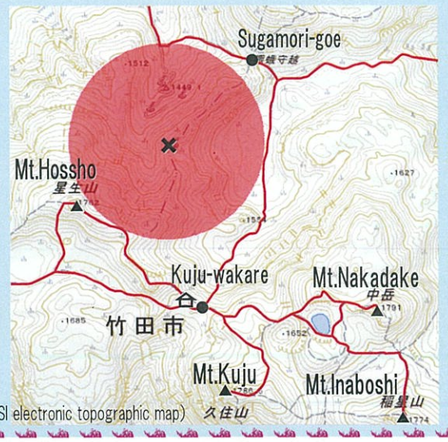
Minerals

In Mt.Io, people used to mine sulfur in Edo era. The sulfur mine was an important local industry, but it was closed in 1971. Some parts of it remain visible even today.

The danger of volcanoes

Hike a volcano

Japan Meteorological Agency has set Kuju Range volcanic alert level as 1 at present: Within 500m from the fumarole of Mt.Io is the keep out area (the area shown as a red circle on the right). Nobody knows when the next eruption will occur. We should always remember Kuju mountains are active volcanoes when we enjoy hiking them.



(Processed GSI electronic topographic map)

Eruption in 1995

On October 11th, 1995, the eruption started on the northern slope of Mt.Hossho. Steam rose about 1000m and smaller scale of pyroclastic flows also occurred. The small scale eruptions had occurred repeatedly, but it was the severest eruption after 257 years' absence. Around Kuju wakare area was a fumarole when a phreatic explosion occurred 3,700 years ago.