

The Hot Springs of the Shimabara Peninsula

The Shimabara Peninsula is famous for its hot springs, called *onsen* in Japanese. In fact, the characters for “Unzen” in the town of Unzen Onsen and the Unzen volcano cluster were an alternate reading of the same kanji characters for *onsen*. They were changed to the current characters in the early twentieth century. Hot springs are especially treasured in three towns across the peninsula: Obama, Unzen, and Shimabara. Learning about the differences between the springs is a good way to more deeply understand the extraordinary volcanic forces that have shaped this region.

Magma is the heat source for all hot springs; springs on the Shimabara Peninsula are heated by magma deep beneath Tachibana Bay to the west. From there, hot gases travel along volcanic vents from west to east, mixing with groundwater and rainwater as they approach the surface. Where this mixture of water and gas emerges, hot springs are formed.

Looking at a map of the Shimabara Peninsula, you can draw an almost straight line between the hot springs of Obama, Unzen, and Shimabara. This is because of another defining characteristic of the region: fault lines. Frequent earthquakes have created cracks in the earth’s crust that follow the orientation of the faults that cause them.

As the magma gets closer to the surface, the temperature and pressure of the gases gradually decreases and their chemical compositions change. This is what causes the *onsen* in Obama to be quite hot with a high hydrogen sulfide content, while the water of the hot springs in Shimabara is cooler and contains more iron. The shape of the magma reservoir and the Shimabara landmass play an important role in how people thrive on the peninsula today—without hot-spring tourism, the peninsula would likely have remained much less populated and developed.
