

## **Geology of Asahikawa and the Kamikawa Basin**

The Kamikawa Basin formed between the mountains of the Kamuikotan Metamorphic Belt and the Idonnappu Zone on bedrock dating from around 150 to 50 million years ago. Subsequent volcanic eruptions created the landscapes of Daisetsuzan and partially filled the basin, forming the broad plain where Asahikawa is located.

### *The bedrock of the Kamikawa Basin*

The basin bedrock formed when an ancient oceanic plate subducted under the Eurasian plate. As the plate descended, some sediment and rocks were carried deep into the earth's crust, where intense pressure transformed them into metamorphic rocks. Other sediment and rocks accumulated at the edge of the continental plate, forming an accretionary wedge. These rock accumulations became the mountains of the Kamuikotan Metamorphic Belt and the Idonnappu Zone respectively.

### *Formation of Hokkaido and the Kamikawa Basin*

The islands of the Japanese archipelago, including Hokkaido, started to emerge around 15 million years ago when plate movements caused part of the Asian continent to break away, and the Sea of Japan to form and expand. As the sea expanded, the breakaway islands moved eastward, and the bedrock of the basin was forced above the ocean surface. The Kamikawa Basin formed as a depression between the resulting mountains.

### *Volcanic activity*

Between 15 and 2.6 million years ago, volcanic activity intensified, and several volcanoes formed around the basin, including Peipanyama and Asahiyama. Large-scale eruptions followed, and pyroclastic flows partially

filled the basin between 2.6 and 0.8 million years ago. Later, the Daisetsuzan Volcanic Group formed, of which Mt. Asahidake is the highest peak (2,291 m). Mt. Asahidake is still active, with its last eruption in the mid-eighteenth century.