

## Tsunami heights of the North Sanriku-Oki earthquake of August 23rd, 1856

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A large earthquake (M7.5) occurred off the north Sanriku coast on August 23rd, 1856. A remarkable tsunami accompanied with the earthquake hit the Pacific coasts of north part of the Japanese Islands. The epicentral area is estimated nearly the same as that of the 1968 Tokachi Oki Earthquake. In the present study we conducted field surveys along the coast of Hokkaido, including Hakodate and Muroran cities. Hakodate was one of the two open port to foreign countries at that time, and the consulate office of Russia had been founded. From three days before the main shock, foreshocks were felt twice or three times a day at Hakodate. The main shock occurred at 13 o'clock and the tsunami hit the port of Hakodate at around 15 o'clock. Sea level rose up about three meters and invaded into streets up to the streets about 300 meters from the west coast. Sea water invaded into the mansion of Tsugaru clum from the east coast up to the height of 8.6 meters above the sea level.

The total distribution of the tsunami height is shown in the figure.

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