



## **Reconstruction of climatic conditions and typhoons around Japan in the late 19th century based on instrumental meteorological records**

Masumi Zaiki (1), Takehiko Mikami (2), Michael Grossman (3), Hisayuki Kubota (4), Junpei Hirano (2), and Rena Nagata (5)

(1) Seikei University, Japan, (2) Teikyo University, Japan, (3) Southern Illinois University Edwardsville, USA, (4) Hokkaido University, Japan, (5) Chiba, Japan

We have been working on a data rescue project to preserve Japanese instrumental meteorological records from the 19th century. These data were collected by foreign residents and visitors, Japanese scientists influenced by Dutch science, and by Japanese merchants. Recently, meteorological records taken at Japanese lighthouses from 1877-1882 have been digitized as a part of the project. These lighthouse data will be useful for reconstructing general climatic conditions and daily weather events such as typhoons that affected Japan.

Based on the instrumental records collected previously, a warmer climate in the 1850s in eastern and western Japan and very wet summer in 1868 in the Kanto Region have been detected. Also, several typhoons between 1877 and 1882 have been matched up with those found in our previous reconstructions based on weather descriptions in historical documents. Using this information, we have made estimations of the tracks of these typhoons.

Additionally, we are setting up a website called the “Japan-Asia Climate Data Program” to distribute the data. Besides the instrumental records, datasets of weather descriptions collected from Japanese historical documents will also be included and made available to the public. We hope that our activities will help stimulate research on past climate reconstructions using this type of data.