

## Outline of research in 2007 at Lake Biwa, central Japa

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Lake Biwa is the largest freshwater lake in Japan, measuring 22.6 km wide by 68 km long and having a maximum depth of 104 m. The lake has a long history from the early Pliocene based on the geological survey and paleogeographical study of lake sediments around Lake Biwa (Kobiwako Group). The sediments revealed the paleoenvironmental change and tectonic events at the convergent margin of the Eurasian plate since early Pliocene times. Deep drillings were carried out 1970's and 1980's in and around present Lake Biwa. These studies showed that the present Lake Biwa Basin bears a sedimentary sequence of about 900 m thickness, which were deposited in lacustrine or fluvial environments. Recently obtained fission-track age of tephra layer at deeper part in the present lake shows the continuous sedimentation of whole lake basin during Quaternary. Correlation of sequence in lake basin with that on land by precise tephrochronology and sedimentary sequence shows the sedimentary reply at lake basin and shore to major glacial interglacial cycles. In preparation for the future drilling project, the present study was created to penetrate the total continuous sediment with a piston corer to study sedimentary records since the last glacial time. In the summer of 2007, we carried out seismic survey and piston coring operation. We recovered piston cores at six localities in the northern part of Lake Biwa. We designed the coring plan to take cores at six locations having different sedimentation rates, and to recover undisturbed sediments as far as possible. Analysis of the core samples are now ongoing in various disciplines including paleomagnetism, environmental magnetism, physical properties, organic and inorganic chemistry, pollen analysis and <sup>14</sup>C dating. Results of these studies will be published soon elsewhere. We present initial results obtained from lithological description, measurements of magnetic susceptibility and tephrostratigraphic correlation of the core sediments.