

Aokigahara lava flow infiltrated into the "Seno-umi" ancient lake deposits -Lake bottom survey in Lake Shoji,Fuji volcano-

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Aokigahara lava flows of the Fuji 864-866 eruption entered into large ancient lake,"Seno-umi" and almost filled up the lake, to make two lakes, Lake Shoji and Lake Sai.

To clarify the distribution and characteristics of the lava flows in the lake in special relation to lake sediments, we have continued to do observation and coring by scuba diving, sounding survey by acoustic profiler SH-20, bathymetrical survey using narrow multi-beam SeaBat8125, radiocarbon AMS dating and paleoenvironmental analyses of core samples, petrochemical and tephrochronological study for lava and scoria.

SeaBat8125 and SH-20 surveys clarified the detailed lake bottom topography, including small and large mounds, fissures, ragged surface of lava, and layered lake deposits. Those were checked directly by diving, and rock and core samples were taken from the bottom.

The results are as follows;

- 1.The lava flow distributes more than 70% of the lake bottom. Higher parts, many of which are tumuli, have no sediment cover, and in the lower part the lava is covered with lake sediments in thickness of 1 to 6 meters.
- 2.The lava in lake area corresponds to Kudari-yama lava, one unit of Aokigahara lava flow (Takahashi et al., 2005).
- 3.Along the western margin of the lake, a number of tumuli are concentrated.
- 4.A large mound, named "Takadai", is located in the lake. The south slope is composed of Kudariyama lava, but the top and northern slope is covered with compact lake sediment of "Seno-umi". The core samples were dated by radiocarbon method to be about 7500, 8600 and 1800 ca.yrs BP.

Discussion

The results obtained in this study suggest the following scenario.

Kudariyama lava, one of Aokigahara lava flows, filled the western half of "Seno-umi", and around the area of Lake Shoji, infiltrated into or under the lake sediments of "Seno-umi", based on the difference in density. This lava run to westward with inflations in various places, and around the mountain side, making a number of tumuli. At "Takadai" mound, the hot succeeding lava entered into the chilled lava and squeezed up, and uplifted the surface lake sediment.