

富士火山北東斜面の滝沢 B 火砕流堆積物の発生・堆積機構

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The Formation and Deposition Processes of Takizawa B Pyroclastic Flow Deposits
on the Northeastern Flank of Fuji Volcano, JapanYasuhisa TAJIMA*, Mitsuhiro YOSHIMOTO**, Nobuko KURODA*,†, Naoko TAKI***,†,
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Eruptions of the Fuji volcano during the Younger-Fuji periods generated basaltic scoria and ash pyroclastic flow deposits. Pyroclastic flows are destructive volcanic hazard because they are high-velocity gravity driven flows and contain extremely high-temperature pyroclastic materials. On the northeast flank of the Fuji volcano, pyroclastic flows were triggered by the collapse of scoria cones and lava, which erupted in the last 1,500 years. Takizawa B1 pyroclastic flow deposit is distributed as far as 5–7 km from the vent. How these pyroclastic flows resulted from basaltic eruptions and how they reached such distances from the vent are poorly understood. In our field investigations, Takizawa B1 pyroclastic flow and cone deposits were identified. In the middle-lower altitude areas, the lower part of the Takizawa B1 pyroclastic flow deposit consists of a scoria- and lithic lapilli-reduced ash units interbedded with a thin ash-rich units. The upper part consists of ash-rich flow units. Scoriaceous materials vary vertically in the Takizawa B1 pyroclastic flow deposit at the middle altitude areas. In the high-altitude area, we found four scoria cone deposits – the Yoshidaguchi cones, which contained scoriaceous materials. This vertical variation in scoriaceous materials within the Takizawa B1 pyroclastic flow deposit is consistent with the distribution of the Yoshidaguchi cones that contain scoriaceous materials and lava from 2150 to 3000 m elevation. Therefore, we conclude that the collapse progressed from a low to high elevation in the vent generation area. The Takizawa B2 pyroclastic flow deposit, which has the same depositional structure as the Takizawa B1 pyroclastic flow deposit, contains a lower temperature, lithic-rich bottom layer and a high-temperature, ash-rich upper layer. The transition of the depositional textures and temperatures indicates the collapse occurred from the outer to inner parts of the scoria cones.

Key words: Pyroclastic flow, Basalt, scoria cones collapse, deposition processes, Fuji volcano

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