

Analysis of pumice layers from Mt.Ontake in Upper Atsuta Formation in Nobi, Central Japan

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In Nobi plain, Pm-1, Pm-2, Pm-3 and Pm-3' pumices from Mt. Ontake (Mizuno, 1996) are found in Upper Atsuta Formation and considered as drift pumices. Because the time when Upper Atsuta Formation formed isn't known very well, these pumices deposits are important. In this report, we try to identify some unknown pumices in borehole cores and discuss availability of drift pumices in Nobi plain in tephro chronology.

The pumice layers are found in core KZ-1. Pm-1', Pm-1, Pm-2, Pm-2', Pm-3' and Pm-3 are six Ontake pumices identified in unit AU from lower to the top, Pm-1' and Pm-2' are firstly reported on the Nobi plain in this study. These are drift pumices transported into Nobi Plain by R.Kiso because volcanic ash fall range does not include Nobi plain. Except of Pm-2', it is strongly possible that the other 5 pumices belongs from individualized Ontake eruptions through the time. Using tephrochronology, unit AU includes sediments deposited from MIS 5d to MIS 5b, and sedimentary sub-units are recognized as AUd, AUc and AUb from the older to the newer. Especially the gravel layer named as AUd is probable identified Fukuzuka Sand-Gravel member (Kuwahara, 1975). There are many reports about the existence of Ontake pumices in Nobi plain and surrounded areas (e.g., Mizuno et al., 1996). It was probably a braided river system during Ontake volcanic activities, because the level of river channel bottom was raised by many pumices flowed in upper river basin of R.Kiso. So many pumices were spread into Nobi plain and surrounded areas widely.

As the results of borehole analysis, there are six pumices from Mt.Ontake in Upper Atsuta Formation under Nobi Plain. In Nobi Plain, Pm-1' and Pm-2' are found for the first time. Though these six Pumices were removed by the paleo R.Kiso they are useful to determine the timing of the Upper Atsuta formation.