

## The Kazusa Group as a standard tephrostratigraphy of Japanese Lower to Middle Pleistocene formations

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Tephrostratigraphy of the Pliocene to Pleistocene formations at Kyushu and Honshu Island are established (Satoguchi and Nagahashi, 2012). Establishment of stratigraphy and chronological model needs integrative interpretation of biostratigraphy, paleo-magnetostratigraphy and other stratigraphic and chronological studies. In the early stages of the work like this, decision of standard stratigraphy for is valid. Satoguchi and Nagahashi (2012) adopted the Kazusa Group as a standard formation of the Pleistocene stratigraphy of Japan.

The Kazusa Group, which is composed of marine deposits, is investigated about magnetostratigraphy, biostratigraphy, correlated with MIS and other stratigraphical studies. Many tephra beds in this group have been described, and data of characteristic properties of these tephras for correlations are accumulated (e.g. Satoguchi, 1995). Some of these tephras are examined for correlations with widespread tephras, are revealed about their volcanic source area. For example, the Ss-Pnk, the Ss-Az and the Kb-Ks tephras are from Kyushu Island (Hayashida et al., 1996; Kamata et al., 1994; Kikkawa et al., 1991). The Ho-Kd39, Eb-Fukuda, Om-SK110 tephras are from the Chubu Mountains (Nagahashi et al., 2000). The JA-O18L tephra is from north of the Kanto district (Nakamura and Arai, 1998). The As-Kd8 and the Hkd-Ku tephras are from the Tohoku district (Murata and Suzuki, 2011; Suzuki et al., 2005). The Kazusa Group contains tephras from various areas. This thing is important for being standard tephrostratigraphy. Tephras mentioned above are widespread tephras that are distributed over 500km. Some tephras in this group are revealed that they distributed relatively small area. Volcanic source of the Byakubi tephra, which is intercalated around boundary of the Lower-Middle Pleistocene, is the Older Ontake Volcano (Takeshita et al., 2005). The Ks12 tephra above the Byakubi tephra is also from the Older Ontake Volcano. These tephras are important for investigation of volcanic history about the Older Ontake Volcano. Therefore, the Kazusa Group is important formation for Japanese stratigraphic studies and investigation of explosive volcanism in the Pleistocene.

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