

## The age of the Inubou Group in the Choshi district, Chiba Prefecture, Japan, based on tephra correlation

TAMURA, Itoko<sup>1\*</sup> ; YAMAZAKI, Haruo<sup>1</sup> ; MIZUNO, Kiyohide<sup>2</sup>

<sup>1</sup>Dep. Geography, Tokyo Metropolitan Univ., <sup>2</sup>AIST, GSJ

Numerous widespread tephra layers of late Pleistocene and Holocene age have been known since the early 1970s and greatly contribute to paleoenvironmental reconstruction in the Japan islands and adjacent seas. This study has identified a new widespread tephra using the trace element composition of volcanic glass determined by ICP-AES analysis and the stratigraphy.

In1 tephra is found at lowest part of the Naarai Formation in the Inubou Group, Choshi district, Chiba Prefecture, accumulated during Pliocene to Early Pleistocene. Ikg1 tephra is found in upper Ikego Formation in the Miura Group, Kanagawa Prefecture, accumulated during Pliocene. B25 tephra is found at Horinouchi Formation in the Kakegawa Group, Shizuoka Prefecture, accumulated during Pliocene to Early Pleistocene.

In1, Ikg1 and B25 tephtras are white and fine grain. The thickness of these deposits range from cm(Ikg1) to 22cm(B25). These tephtras mainly consist of glass shards of bubble-wall type. The glass shards of these are poor in K<sub>2</sub>O (<2 %) and La (<15 ppm) and rich in Y(>40 ppm), which give low La/Y (about 0.3) and high Ba/La (about 30). These characteristic chemical compositions of glass in tephtras erupted from the Tohoku area (Mizuno, 2001).

The age of In1 tephra is estimated at about older than 3 Ma based tephrochronology in Choshi area (Tamura et al.,2007). The age of Ikg1 is estimated at about older 3.1Ma based biostratigraphy and magnetostratigraphy (Utsunomiya et al, 2012 and Utsunomiya, 2013). The B25 tephra is estimated at about older 2.9Ma based on tephrochronology (Tomita and Kurokawa, 1999 and Kurokawa and Tomita, 2000).

This tephra correlation indicates that the age at lowest part of the Inubou Group is estimated older than 3.1 Ma.

Keywords: Plio-Pleistocene, Tephra correlation, Inubou Group, Depositional age, Marker Tephra